DOCUMENT RESUME

ED 451 425 CG 030 737

TITLE	Dangerous Liaisons: Substance Abuse and Sex.
INSTITUTION	Columbia Univ., New York, NY. National Center on Addiction and Substance Abuse.
SPONS AGENCY	Carnegie Corp. of New York, NY.; Henry J. Kaiser Family Foundation, Menlo Park, CA.
PUB DATE	1999-12-00
NOTE	149p.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	*Adolescents; At Risk Persons; Comparative Analysis; *Drinking; *Illegal Drug Use; Prevention; Program Descriptions; *Rehabilitation; *Sexuality; *Substance Abuse; Violence

ABSTRACT

This report takes a comprehensive look at the connections between alcohol, drug use, and sex. Two national data sets on more than 34,000 teenagers and two sets on arrested and incarcerated sex offenders were analyzed. A review of the literature, interviews with experts, and an examination of programs aimed at prevention of abuse were included in the analysis. Chapter 1 presents an introduction and executive summary of the report. Chapter 2 describes the connection between substance use and sex. It includes discussion of religious beliefs, cultural and family values, and media messages and entertainment containing sexual images. Chapter 3 discusses how alcohol and drugs can affect sexual performance and pleasure. Chapter 4 discusses the relationship between alcohol, drugs, and dangerous sexual activity. Individuals using alcohol and drugs are more likely to initiate sex at earlier ages, have more sexual partners and more casual sex partners, and have sex with higher risk partners. Chapter 5 presents specific problems associated with substance abuse and sex among America's teens. Chapter 6 discusses how substance abuse is related to sexual violence. Chapter 7 reviews information concerning sex offenders, recidivism, and treatment. Chapter 8 details substance abuse among prostitutes. Chapter 9 presents ideas for improving policy and practice by summarizing prevention programs already in place. Chapter 10 provides suggestions on how to break down the connection between substance abuse and sex. (Contains 9 appendixes, 14 figures, 19 tables, and over 400 references.) (JDM)

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Dangerous Liaisons:
Substance Abuse and Sex

December 1999

Funded by:
The Henry J. Kaiser Family Foundation
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Table of Contents

Accompanying Statement i
I. Introduction and Executive Summary 1
  Alcohol, Drugs and Sexual Activity 2
  Recommendations 5
II. Substance Use and Sex: What's the Connection? 7
  Physiological Connections 7
    Arousal 7
    Aggression 8
    Vulnerability 8
  Personal, Social and Cultural Connections 8
    Risk-Takers and Sensation-Seekers 8
    High Expectations 9
    The Excuse 9
    The Setting 9
    Popular Culture 10
    Religion 11
  High-Risk Populations 11
    Teenagers 11
    Women 11
    Gay and Bisexual Men 11
    Alcohol and Drug Abusers and Addicts 12
    Prostitutes 12
  The Chicken and Egg Syndrome 12
III. Alcohol, Drugs and Sexual Pleasure 13
  Alcohol 13
    More Alcohol Equals More Sexual Problems 14
      Acute Effects on Men 14
      Chronic Effects on Men 14
      Acute Effects on Women 14
      Chronic Effects on Women 15
  Nicotine 15
  Marijuana 15
  Cocaine 16
  Amphetamines 17
  Opiates 17
  Volatile Nitrates (Poppers) 18
  Psychedelics/Hallucinogens 18
    Lysergic Acid Diethylamide (LSD) 18
    MDMA (Ecstasy) 18

    - Phencyclidine (PCP) ... 19
    - Ketamine ... 19
    - Gamma Hydroxybutyric Acid (GHB) ... 19
  - Prescription Drugs ... 20
    - Anabolic-Androgenic Steroids ... 20
    - Antipsychotics and Antidepressants ... 20
    - Benzodiazepines ... 20
    - Viagra ... 21
    - Poly-Substance Use ... 21

IV. Alcohol, Drugs and Sexual Activity ... 23
  - Prevalence ... 23
  - Increased Consumption of Alcohol Equals Increased Sexual Activity ... 24
  - Early Initiation of Sexual Activity ... 24
  - Multiple Sex Partners ... 24
    - Alcohol and Multiple Sex Partners ... 24
    - Drugs and Multiple Sex Partners ... 25
  - Casual Sex Partners ... 26
  - Alcohol, Drugs and STDs ... 27
    - Heavy Alcohol Users Have Higher STD Rates ... 27
    - Drug Users Often Have STDs ... 28
  - Alcohol, Drugs and HIV/AIDS ... 28
    - Alcohol and HIV/AIDS ... 28
    - Drugs and HIV/AIDS ... 29
  - Alcohol, Drugs and Condom Use ... 29
    - Alcohol and Condom Use ... 29
    - Drugs and Condom Use ... 30
  - Alcohol, Drugs and Unintended Pregnancy ... 30

V. Alcohol, Drugs and Sex Among America's Teens ... 33
  - Teens Sexual Activity ... 33
  - Teen Alcohol and Drug Use ... 34
  - Sex and Drugs May be Red Flags for Each Other ... 34
  - Early Initiation of Sexual Activity ... 35
  - The More Alcohol and Drugs, the More Sex Partners ... 36
  - Teens are Poor Condom Users With or Without Alcohol and Drugs ... 36

VI. Substance Abuse and Sexual Violence ... 39
  - Rape and Sexual Assault ... 39
    - Alcohol ... 39
    - Drugs ... 40
  - Alcohol, Drugs and Date Rape ... 42
    - Alcohol and Date Rape ... 42
    - Drugs and Date Rape ... 43
  - Alcohol, Drugs and Violence Among Intimate Partners ... 43
  - Alcohol, Drugs and Sexual Abuse of Children ... 44

Victims of Sexual Violence 45
VII. Sex Offenders, Recidivism and Treatment 47
Characteristics of Substance-Abusing Sex Offenders 47
Demographic Characteristics 48
Substance Abuse and Criminality in the Families of Sex Offenders 49
Sexual and/or Physical Abuse History 49
Mental Health Problems 49
Educational and Vocational Experiences 49
Recidivism 50
Treatment 50
Why Invest in Treatment? 51
VIII. Substance Abuse and Prostitution 53
Trading Sex for Drugs 53
Condom Use Among Prostitutes 54
Alcohol and Drug Use by Those Who Frequent Prostitutes 55
Drugs and Sexual Violence Among Prostitutes 55
IX. Improving Policy and Practice–Experience from the Field 57
Prevention Programs 58
Prevention Programs for Adolescents 58
Prevention Programs for College Students 60
Prevention Programs for Gays 62
Substance Abuse Treatment Programs 62
Victims of Sexual Violence 62
Sex Offenders 63
X. Breaking the Dangerous Liaisons Between Substance Use and Sex 65
References 69
Appendix A 113
Appendix B 117
Appendix C 131
Appendix D 135
Appendix E 145
Appendix F 149
Appendix G 151
Appendix H 155
Appendix I 169

Accompanying Statement By Joseph A. Califano, Jr. Chairman and President

This CASA report, *Dangerous Liaisons: Substance Abuse and Sex*, is an unprecedented effort to analyze the complex connections between substance abuse and sexual activity, function, pleasure and violence, with particular attention to the consequences of such connections for our nation's teenagers.

The report is the culmination of two years of work, including the most penetrating analyses of relationships between substance use and sexual activity ever undertaken. In preparing the report, we conducted original analyses of various national data sets of more than 34,000 teenagers, as well as data sets of sexual offenders; reviewed more than 800 articles and books; talked with more than 100 experts in relevant fields; and examined dozens of prevention and treatment programs concerned with substance abuse, sex and sexual violence.

Before graduating from high school, every teen in America will have to make a conscious choice--most on numerous occasions--whether to drink alcohol, whether to use illegal drugs and whether to have sexual intercourse. Even more troubling, many children will face these choices in middle school when they are 10- to 13-years-old. Those children and teens who choose to drink or use illegal drugs are much more likely to have sexual intercourse, to have it at younger ages and--while still teens--to have sexual intercourse with several individuals.

Among the report's key findings are these:

- Teens who drink are seven times likelier than those who don't to have sexual intercourse.

- Teens who use drugs are five times likelier than those who don't to have sexual intercourse.

- Adolescents are initiating sex at earlier ages. Fifteen-year-old females reporting sexual intercourse increased from less than five percent in 1970 to 21 percent in 1995 and males from 20 percent in 1972 to 27 percent in 1987.[1] CASA's analysis suggests that the percent of 15-year-olds who have had sex continues to rise--in 1997, 38 percent of 15-year-old girls and 45 percent of 15-year-old boys reported having had sexual intercourse. Over the same period, the age of at which teens started using drugs and binge drinking dropped.

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[1] The latest available numbers from this data set.

- Teens who use alcohol are twice as likely and teens who use drugs are three times as likely as nonusing teens to have sexual intercourse with four or more individuals.

- Teens under 15 who have ever had a drink are twice as likely as those who have not to have had sexual intercourse.

- Teens under 15 who have ever used drugs are almost four times as likely as those who have not to have had sex.

Teen sexual activity linked to alcohol and drug use increases the chances of infection with sexually transmitted diseases (STDs), such as syphilis, gonorrhea, chlamydia and AIDS and of unintended pregnancy. The United States has the highest rate of STDs in the developed world.

While it is clear that teens who drink and use drugs are likelier to have sexual intercourse at earlier ages and with many partners, it is not clear which starts first--sexual intercourse or drinking or drug use. Nevertheless the report contains a loud and clear message for parents, clergy, school counselors and other caring adults: whichever teen activity--sex or substance use--first comes to their attention, these adults should be prepared to work with the teen on both matters.

The link between alcohol and dangerous sexual activity crops up repeatedly throughout this report. For many reasons, many Americans tend to look the other way when confronted with the damaging and widespread consequences of alcohol abuse. But when such abuse ratchets up the danger that our teens will contract sexually transmitted diseases including AIDS, become perpetrators and victims of sexual violence, and become pregnant--as this report makes clear--it is time to step up our efforts to stem teen drinking and to enforce and strengthen laws prohibiting the sale of beer and alcohol to minors.

Parents should think about their own alcohol use and the messages it sends to their children. CASA's *Back to School 1999: National Survey of American Attitudes on Substance Abuse V: Teens and Their Parents*, released this August, revealed that a father who has three or more drinks each day increases his teen's risk of drug use by more than 70 percent. It's time to reexamine the wisdom of accepting alcohol use and abuse as an acceptable rite of passage for teens and college students.

Other key findings of this report are:

- Alcohol use--by the victim, the perpetrator or both--has been implicated in up to 75 percent of date rapes of college women. We believe the percentage is even higher. Alcohol or drug use may serve as a trigger for aggressive behavior or for conduct that sends easily misunderstood sexual cues.

- Among adults, heavy drinkers[2] are five times more likely than nonheavy drinkers to have sex with at least 10 partners a year.

- Problem drinkers[3] and individuals who have ever used drugs are three times likelier than nonproblem drinkers or nondrug users to contract a sexually transmitted disease.

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[2] As used here, heavy drinking connotes at least two months of drinking seven or more drinks at least once a week; or two weeks of daily drinking at least seven drinks; or ever having 20 or more drinks in one day.

[3] As used here, problem drinking connotes ever having had three of eight major symptoms of increased tolerance and desire for alcohol, impaired control, withdrawal or social disruption.

- Alcoholic males have more than three times the rate of impotence of nonalcoholic males and episodes of impotence persist even after years of sobriety. Chronic use of drugs like cocaine and heroin and cigarette smoking have been related to impotence.

- Heavy or chronic use of many substances including alcohol, cocaine and amphetamines--thought to enhance sexual arousal, pleasure and performance--actually diminish such characteristics.

- Women who have suffered sexual abuse as children are more likely than nonabused women to abuse alcohol (27 to 37 percent compared to four to 20 percent) and drugs (14 to 31 percent compared to three to 12 percent). Men who have been sexually abused are likelier to use drugs and commit sex offenses than nonabused men.

- Alcohol is implicated in more incidents of sexual violence--including rape and child molestation--than any other single drug; 38 percent of sex offenders in state prison were under the influence of alcohol at the time of the crime, 14 percent under the influence of marijuana and seven percent under the influence of cocaine.

- Most incarcerated sex offenders abuse alcohol and drugs. The states spent $1.6 billion to incarcerate substance-related sex offenders in 1998.

- Gay men who combine alcohol and drugs with sex increase their risk of contracting AIDS through unprotected anal sex.

The report finds close and often dangerous liaisons between substance abuse and sexual activity, particularly for children, teens and women. Substance abuse is a common culprit in dangerous and risky sex. Alcohol and drugs are employed by some in attempts to obtain sex or in date rape situations. Drug addicts trade sex to feed their habits. Child molesters are often under the influence of alcohol or drugs at the time of their crime. Individuals who have experienced the horror of sexual violence often self-medicate with alcohol or drugs.

While alcohol and drug use have a disinhibiting influence on sexual conduct of teens and adults, in particular situations it is not possible to conclude with any certainty which comes first --sexual arousal leading to intercourse or substance use. In some cases, the arousal prompts the drinking or drug use to eliminate inhibitions; in others, the drinking or drug use prompts the sexual activity.

Despite the high coincidence of substance abuse and sexual activity, including risky and violent sexual activity, remarkably few public or private prevention, treatment and counseling programs attend to the connection. The report urges that alcohol and drug treatment programs confront the connection and that drug and alcohol counselors be trained to spot and help deal with sexual problems of clients. Substance abuse prevention and sex education programs for children and teens should deal with the relationship between drinking and using drugs and sexual activity.

We are mindful of the controversial nature of the subjects discussed in this report. A key CASA mission is to inform the American people of the impact of substance abuse and addiction on society and their lives. We are issuing this report to alert parents, clergy, school teachers and counselors, professionals and teens to the dangerous, sometimes life-threatening relationship between alcohol and drug abuse and sexual activity.

We have tried to report the findings in a way that will be helpful to all who share responsibility for dealing with the problems of substance abuse and sexual conduct, whatever their moral standards, religious beliefs, or personal or family values. For parents and religious leaders--such as Catholics, Orthodox Jews and many

Muslims and Christians including Christian fundamentalists--who believe that sexual abstinence before marriage is a moral imperative or commanded by the law of God, the report signals the importance of persuading teens not to use alcohol or illegal drugs in order to help them maintain their virginity. For those who consider teen sexual activity an appropriate rite of passage, the report points up the greater likelihood that those who drink and use drugs will have sex earlier and with more people, hiking their risk of contracting sexually transmitted diseases or becoming pregnant.

For the financial support that made this effort possible, we express our appreciation to The Henry J. Kaiser Family Foundation and its courageous president, Drew Altman, Ph.D. We are also grateful for the support of the Carnegie Corporation of New York.

Susan Foster, MSW, CASA's Vice President and Director of Policy Research and Analysis, is responsible for this report and supervised its research and preparation. Steven Belenko, Ph.D., was Senior Research Associate and Jordon Peugh, M.A., was Research Associate. Stacy Rosenfeld, M.P.A., M.S., and Victoria Blinder-Acenal served as interns. Arsenio De Guzman helped as research assistant. David Man, Ph.D., CASA's librarian, Ivy Truong and Amy Milligan of our library staff, and Roger Vaughan, Ph.D., head of CASA's Substance Abuse Data Analysis Center (SADAC) provided enormous help. Herbert Kleber, M.D., Executive Vice President and Medical Director; Dana Best, M.D., Research Associate; and John Muffler, Ph.D., Senior Research Associate reviewed the report and I edited it. Jane Carlson, as usual, handled the administrative chores with efficiency and good spirit.

We are grateful for the cooperation of many directors of education, prevention and treatment programs who answered our endless questions. We especially appreciate the help of CASA's Advisory Committee for this project: Nabila El-Bassel, Ph.D., Associate Professor/Associate Director, Social Intervention Group, Columbia University School of Social Work; Patrick Fagan, Senior Fellow, The Heritage Foundation; Brenda A. Miller, Ph.D., Professor/Director, Center for Research on Urban Social Work Practice, State University of New York at Buffalo and Kathleen Sylvester, Director, Social Policy Action Network. They were invaluable in guiding this effort and reviewed a draft of this report.

As always, responsibility for the analysis and findings rests with CASA.

I. Introduction and Executive Summary

From the tentative yearnings of youth to the passions of adulthood and the deep intimacy of old age, sex is a thread of life's fabric. It can move an individual to acts of great tenderness or cruelty. Sexual behavior is complex--an interplay of hormones, emotions and culture, of body, mind and spirit. Most individuals navigate these forces to realize the joy, beauty and fulfillment of loving sexual expression. Many Americans use alcohol or other drugs to facilitate sex. The mild intoxicating effects of a drink of wine, beer or liquor can bring on relaxation and sexual pleasure. But as one drink turns to two or three or more--or under the influence of cocaine or other drugs--relaxation can turn to panic; joy and beauty to heartbreak and regret; pleasure to pain, brutality and even death.

This report is a comprehensive look at the intimate and complicated connections between alcohol and drug use and sex. As part of this unprecedented two-year analysis, CASA conducted an original examination of two large national data sets of more than 34,000 teens and two such sets of arrested and incarcerated sex offenders.[4] We reviewed more than 800 articles and books on the topics of substance use and abuse, sex and sexual violence, interviewed more than a hundred experts and examined dozens of programs aimed at intervening in substance abuse and sexual activity. The result of this review is the most in-depth analysis of the connection between alcohol and drug use and all aspects of sexual activity and violence that has ever been conducted and presented in one report.

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[4] The Center on Disease Control and Prevention's 1997 Youth Risk Behavior Survey (YRBS), the 1995 National Longitudinal Study of Adolescent Health (Add Health), The Bureau of Justice Statistics' 1991 Survey of State Prison Inmates and The National Institute of Justice's 1997 Arrestee Drug Abuse Monitoring Program.

Lack of data and ambiguity in available data present obstacles in CASA's research.[5] [i] Nevertheless, this study sheds much needed light on this powerful and too often destructive relationship. Among the most important findings are:

- Teens who use alcohol and drugs are more likely to have sexual intercourse, to initiate sexual intercourse at earlier ages, to have multiple sexual partners and to be at greater risk for sexually transmitted diseases (STDs), HIV/AIDS and pregnancy.

- Alcohol is more closely linked to sexual violence than any other drug and is a common companion to rape, including date rape and child molestation. Alcohol use, by the victim, the perpetrator or both, is implicated in up to 75 percent of date rapes of college students.

- Adults who use alcohol and drugs are likelier to have more sexual partners, more casual sex partners and higher rates of sexually transmitted diseases and HIV/AIDS. Lifetime medical costs of new AIDS cases in 1998 contracted by the combination of sex and drug use will amount to $328 million.

- Heavy or chronic use of alcohol and other drugs, such as cocaine or heroin, impairs sexual desire and performance. Male alcoholics have more than three times the rate of impotence of nonalcoholic males and episodes of impotence persistent even after years of sobriety. Researchers have found a connection between chronic use of drugs like cocaine and heroin and impotence and between cigarette smoking and impotence.

- Sixty-six percent of sex offenders in state prison were under the influence of drugs or alcohol at the time of their crime; committed a sex crime during an attempt to get money to buy drugs; had histories of regular illegal drug use; had received treatment for alcoholism; or shared some combination of these characteristics. Thirty-eight percent of incarcerated sex offenders were under the influence of alcohol or alcohol and drugs at the time of the crime; five percent were under the influence of drugs alone. The annual cost to states in 1998 for incarcerating substance-involved sex offenders was $1.6 billion.

- Forty-two percent of arrested sex offenders tested positive for drugs at the time of the arrest; 14 percent for marijuana only and 28 percent for any other drug.

- Few substance abuse or violence prevention and treatment programs or pregnancy prevention programs emphasize the connection between substance use and sex.

Alcohol, Drugs and Sexual Activity

Teens who use alcohol and drugs are more likely to have had sex, to have sex at younger ages and to have more sex partners. Teens who drink are seven times more likely to have sexual intercourse than those who do not, after adjustments for the influence of age, race, gender and parents' education level. Teens who use drugs are five times likelier to have sexual intercourse than those who do not after making such adjustments.[ii] For those who initiated alcohol use prior to age 14, 20 percent had sex at age 14 or younger compared to only seven percent of those who did not initiate alcohol use at such a young age.[iii] Alcohol-using teens are twice as likely and drug-using teens are three times as likely as those who do not drink or use drugs to have had multiple sexual partners (four or more sex partners).

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[5] For a discussion of limitations of the data, see Appendix A.

Adults who abuse alcohol and drugs are more likely to have more sexual partners and to have more casual sex partners. For individuals age 18 to 30, the likelihood of having two or more partners in the prior year is twice as great among binge drinkers (defined in that study as five or more drinks on one occasion) as it is for those who did not binge drink in the prior year.[iv] Heavy drinkers[6] (age 18 and over) are five times more likely than nonheavy drinkers to have sex with at least 10 partners in a year.[v] Marijuana users (age 18 to 30) are three times likelier than nonusers to have sex with two or more partners in a year.[vi] Thirty-seven percent of crack cocaine users (age 18 to 29) admit having more than a 100 lifetime sexual partners, compared to only three percent of those who do not use crack.[vii]

Young men (age 18 to 30) who had been drinking at last sex with a new partner are more than twice as likely as those who had not been drinking to have sex with a casual partner--someone they had just met, a friend, or an acquaintance rather than a boyfriend, girlfriend, fiancé(e) or spouse.[viii] They are twice as likely to have known that person for less than three weeks. Young women who had been drinking at last sex with a new partner are four times more likely than those who had not been drinking to have sex with a casual partner and twice as likely to have known that person for less than three weeks.[ix]

Sexual activity increases as consumption of alcohol increases. For young men (age 18 to 30) reporting on their heaviest drinking episode in the last year, 35 percent had sexual intercourse when consuming five to eight drinks and 45 percent had sexual intercourse when consuming eight or more drinks, compared to 17 percent who had one or two drinks.[x] For young women (age 18 to 30) reporting on their heaviest drinking episode in the last year, 39 percent had sexual intercourse when consuming five to eight drinks and 57 percent had sexual intercourse when consuming eight or more drinks, compared to 14 percent who had one or two drinks.[xi] This association holds true for college students, African-American women, gay men and alcohol treatment participants.[xii]

Most adults and teens are poor condom users whether they use alcohol or drugs. While common sense suggests that being high on alcohol and drugs would make one less likely to use a condom,[xiii] a study of adults (age 18 and over) found that those who were inconsistent condom users when drinking also were inconsistent condom users generally.[xiv] Another study of college students found that those who generally were consistent condom users also were likely to use condoms if drinking.[xv] Self-reported condom use by adolescents at the time of first intercourse has increased over the last decade--from 47 percent in 1988 to 60 percent in 1995 among females and 55 percent in 1988 to 69 percent in 1995 among males.[xvi] Yet, only about half of sexually active teens used a condom at last intercourse.[xvii] Studies of gay and bisexual men do find an association between drug use and high risk sex, including failure to use condoms.[xviii]

People who abuse alcohol and use drugs have higher rates of STDs and HIV/AIDS. Adults who drank to intoxication in the last year are nearly twice as likely as those who did not to have had an STD.[xix] Problem drinkers and those who ever used drugs are three times likelier than nonproblem drinkers and nondrug users to have contracted an STD.[7] [xx] Projecting these findings to the national population: among 25 million adult Americans estimated to be problem drinkers, some five million would have contracted an STD; among a similarly sized group of people without drinking problems, only one and one- half million would have.[xxi] STD prevalence rates among alcoholics and crack users range from 30 percent to 87 percent, compared to approximately 1.6 percent among the general population of adults.[xxii] While rates of HIV infection in the general population are estimated to be less than one percent,[xxiii] estimates of HIV among alcohol abusers and noninjecting drug addicts have been found to range from three percent to more than a third.[xxiv]

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[6] Heavy drinking is defined here as ever having 20 or more drinks in one day; or two weeks of daily drinking at least seven drinks; or at least two months of drinking seven or more drinks at least once a week. Levels of drug and alcohol use and abuse are defined differently in different studies/analyses. Throughout this report, footnotes specify the definitions employed.

In 1998, it was estimated that of the 15.3 million new cases of STDs,[8] 25 percent or 3.8 million cases were among teens age 15 to 19.[xxv] At an average annual medical cost of $179 per case, these teen STDs cost some $680 million to treat in 1998 alone.[xxvi] Since teens who use alcohol are seven times likelier and teens who use drugs are five times likelier to be sexually active and at greater risk for STDs, preventing substance use would yield considerable savings in medical costs and human misery.

Alcohol is more closely linked to sexual violence than any other drug. Among the more than 115,900 sex offenders in state prison in 1998, 76,490 (66 percent) were under the influence of drugs or alcohol at the time of their sex crime; committed their crime during an attempt to get money to buy drugs; had histories of regular illegal drug use; had received treatment for alcoholism; or shared some combination of these characteristics. Among incarcerated sex offenders, 26,660 (23 percent) were under the influence of alcohol alone, 17,380 (15 percent) both alcohol and drugs and 5,790 (five percent) drugs alone. Those under the influence of specific drugs--possibly in combination with alcohol--included 16,230 (14 percent) marijuana, 10,430 (nine percent) cocaine and 1,160 (one percent) heroin. Estimates of the extent of alcohol involvement in cases of child sexual abuse range from 30 to 40 percent of reported cases.[xxvii] Sixty-five percent of incarcerated incest offenders were drinking at the time of the offense.[xxviii] The extent of drug involvement in cases of child sexual abuse is unknown.

Alcohol is a frequent companion to date rape. Alcohol use by the victim, the perpetrator or both, is implicated in 46 to 75 percent of date rapes of college students.[xxix] The actual prevalence is likely even higher due to under-reporting. Rohypnol is often cited as the date rape drug; however, in a study, commissioned by the makers of Rohypnol and conducted by an independent laboratory, of urine samples of victims who believed that they were drugged prior to their attack, less than one percent of 1,891 urine samples tested positive for Rohypnol and three percent for gamma hydroxybutyric acid (GHB) (another drug recently connected to date rape), while 41 percent of the victims tested positive for alcohol.[xxx]

Individuals who have been sexually assaulted are more likely to abuse alcohol and drugs. Twenty-seven to 37 percent of female victims of childhood sexual abuse have been found to develop alcohol-related problems at some time in their lives, compared to a range of four to 20 percent of other women. Fourteen to 31 percent of sexually abused women become drug abusers or addicts compared to three to 12 percent of other women.[xxxi] Between 11 and 31 percent of victims of sex offenses admit being under the influence of alcohol during the offense.[xxxii]

Involvement in risky sexual behavior is highest among people who have problems

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[7] Problem drinking was defined as ever having had three of eight major symptoms indicating an increased tolerance for alcohol, an increased desire for alcohol, impaired control over drinking, symptoms of withdrawal and increased social disruption.

[8] Excluding HIV and bacterial vaginosis.

with both drugs and alcohol or who use multiple drugs.[xxxiii] Alcoholics who abuse drugs are much more likely than alcoholics who do not abuse drugs to have sex with multiple partners, not use condoms, be HIV-positive, have a history of STDs and have traded sex for money or drugs.[xxxiv]

Heavy or chronic use of alcohol and drugs impairs sexual desire and performance. In the case of alcohol, less is more in terms of sexual performance and enjoyment. Low to moderate amounts of alcohol (one or two drinks depending on factors such as weight, age and gender) may have no impact or facilitate sexual response for some, but the heavy and chronic use of alcohol and the sustained use of most drugs--including cocaine, amphetamines and heroin-- impairs sexual arousal and function. Male alcoholics have more than three times the rate of impotence of nonalcoholic males and episodes of impotence persistent even after years of sobriety.[xxxv] Researchers have found a connection between chronic use of drugs like cocaine and heroin and impotence and between cigarette smoking and impotence.[xxxvi] Women alcoholics in a recovery program exhibited much higher incidences of sexual dysfunction than a control group of nonalcoholic women--64 percent reported lack of orgasm compared to 27 percent; 61 percent reported lack of sexual arousal/pleasure compared to 30 percent.[xxxvii]

Drug- and alcohol-using sex offenders have a more extensive history of involvement in the criminal justice system than nonusing sex offenders. Among incarcerated sex offenders, 74 percent of those who were drug-involved and 58 percent of those who were only alcohol-involved were convicted of one or more prior offenses, compared to 44 percent of nonusers.[xxxviii]

Most prostitutes are alcohol and drug abusers and many alcohol and drug abusers turn to prostitution to support their habits. An estimated 40 to 86 percent of prostitutes are drug users[xxxix] and 18 to 72 percent of drug users have been found to trade sex for money or drugs.[xl] Heavy drinkers are more than three times likelier than nonheavy drinkers to admit getting paid for having sex.[xli]

Individual expectations about alcohol and sex may be self-fulfilling prophecies. Many Americans believe that drinking enhances sociability, reduces inhibition and anxiety, increases arousal and triggers sexual aggression. Individuals who believe that they have been given alcohol are likelier to report increased arousal, whether or not they actually drank the alcohol.[xlii] Men who believe they have been given alcohol have been found to exhibit increased arousal in response to scenes that suggest sexual violence, whether or not they actually drank any alcohol.[xliii] Teens who expect alcohol to lead to sexual disinhibition are likelier to participate in risky sexual behavior when they drink.[xliv]

The close association between substance use and sexual behaviors varies by individual personality and social situation. Individuals often drink or use drugs to gain courage, sedation or justification to do something that is uncomfortable or unwise, including sexual activity.[xlv] Motives for substance use, including mood enhancement, socialization and acceptance, easing stress, relieving pressure, low self-esteem or depression may drive sexual activity as well.[xlvi]

Intervention programs often fail to address the relationship of alcohol and drugs with sexual activity. Although the links between alcohol and drugs and teen sex, risky sex and sexual violence are clear, prevention, education and treatment programs often fail to address these links. Drug prevention programs for teens rarely address sex; sex education and pregnancy prevention programs for teens rarely address alcohol and drugs. Substance abuse treatment programs rarely help participants come to grips with their increased sexual risks or the potential of decreased sexual function. Programs for victims of sexual violence often ignore alcohol or drug use by the victim. Only 28 percent of all substance-involved sex offenders report receiving substance abuse treatment while in prison, compared to 37 percent of those substance-involved inmates incarcerated for other violent crimes.[xlvii]

Recommendations

Parent power is key to reducing a teen's risk of substance abuse. Parents should invest their children with the values and standards of conduct to deal with the world of sex and substances that their children will face. Every teen will be required to choose whether to drink, use drugs and have sexual intercourse. Parents will have more influence over how their children respond than anyone else. How parents exercise their power in talking to their children about drinking, using drugs and engaging in sexual activity will be critical in how their children respond to the lure of alcohol, drugs and sex. There are no silver bullets, but parents can make the biggest difference in the lives of their children.

Schools, health and social service providers should create comprehensive prevention programs that address both substance abuse and sex. They should offer age-appropriate and effective education about the association between substance use and sex (e.g., the impact of substance use on sexual pressure, risk-taking and sexual violence, sexual inhibition) and practical skill-building to manage this association (e.g., role-playing, negotiation skills, strategies to resist pressure, ways to avoid high-risk situations).

Substance abuse treatment programs should confront issues of sexual risk. Such programs should perform a complete assessment of client sexual activity and health (including STDs, HIV and sexual dysfunction), victimization experiences (both as a child and an adult) and violent tendencies. Programs should help clients recognize how substance abuse and risky sexual behaviors are connected.

Programs to help individuals subjected to sexual violence should be sensitive to the possibility of substance abuse. Professionals servicing those who have been on the receiving end of sexual violence should be trained to identify and know how to deal with substance abuse and addiction by their clients.

Health care professionals should recognize the connections between substance abuse and sexual activity, assess their patients for such problems and arrange appropriate treatment.

State and federal criminal justice and prison systems should assess all sex offenders to identify treatment needs related to alcohol and drug abuse and addiction and provide treatment for those who need it.

Government programs and insurance providers should provide adequate funding for appropriate treatment. Insurers should expand coverage of substance abuse treatment and mental health services.

Increase the nation's investment in research in prevention and treatment.

II. Substance Use and Sex: What's the Connection?

Unraveling the connections between substance use and sex requires an understanding of how alcohol and drugs work in the body and the brain. Physiological forces and emotional commitment inspire sexual desire and affect sexual performance. Religious beliefs and cultural and family values set boundaries for acceptable sexual activity. Media messages and entertainment bombard us with sexual innuendo and explicit sexual images. The effects of alcohol, illicit and prescription drugs and even tobacco must be measured in the context of these influences.

Physiological Connections

Arousal

> *But after a drink, Venus gets in my thinking,*
> *For just as true as cold engenders hail*
> *A thirsty mouth goes with a thirsty tail.*
> *Drinking destroys a woman's last defense*
> *As lechers well know from experience.*
>
> --Chaucer, *The Wife of Bath*

A prevailing myth about substance use and sexual arousal is that alcohol and drugs have a positive impact--heightening sexual arousal, reducing sexual inhibitions, contributing to greater enjoyment of sex and encouraging exciting sexual risk-taking. While the equivalent of one drink of alcohol may be associated with increased arousal of men[1] and increased sexual pleasure for women,[2] this is not true for everyone and more is decidedly not better. The reality of more is that heavy alcohol or chronic drug use has a negative impact--decreasing physical arousal, reducing ability to orgasm and contributing to a lack of sex drive (see Chapter III).

Aggression

Substances, particularly alcohol, are often considered a physiological trigger for aggressive behavior or deviant sexual arousal, which may increase the likelihood of sexual violence.[3] Drinking to low levels of intoxication may induce changes in the brain that are associated with increased aggression.[4] The connection between substance use and aggression may be closest for individuals who are predisposed to sexual aggression.[5]

Alcohol, Drugs and Sexual Violence at Woodstock '99

> *As of late yesterday, the police said they knew of four reported rapes at the three-day event, in Rome, N.Y. Three of them were believed to have occurred in Woodstock's sprawling 260-acre campground and... involved women who were dragged into tents and raped by one or more men, said Capt. John Wood of the state police. A fourth woman was said to have been raped in the "mosh pit" – a circle of body-slamming dancers – directly in front of the stage....*
>
> *Drugs or alcohol, or a mixture of both, played a role in each case, the captain said.*
>
> *The third assault occurred between 2 and 4 P.M. on Sunday, when as many as three men attacked a 20-year-old Virginia woman in a tent after... [taking] the designer drug Ecstasy.*
>
> --*The New York Times*
> July 30, 1999[7]

Vulnerability

Alcohol and drugs can impair an individual's ability to evaluate risks involved in sexual intercourse. College students under the influence of alcohol perceive lower risks associated with unsafe sexual practices than those who were not drinking and even than those who thought they were consuming alcohol but had been given a placebo.[6]

Alcohol Can Trigger Physical Vulnerability to Sexual Violence

> *You don't have a lot of strength [when drunk]... If I hadn't have been drunk, it probably wouldn't have happened because I could have gotten up and ran out.*
>
> --Female college student
> who experienced alcohol-related
> sexual assault[8]

Alcohol or drug use may diminish the ability of a victim or aggressor to read sexual cues and thus increase the likelihood of sexual violence.[9] The physical and mental incapacitation of intoxication may prevent a potential rape victim from recognizing and correcting sexual misperceptions and make it more difficult to resist force.[10] Intoxicated rape victims are less likely than others to scream for help, run away or struggle with their assailant.[11] Drinking by the assaulted individual is more likely to result in executed rather than attempted rape.[12]

Personal, Social and Cultural Connections

The connection between substance use and sex is influenced by personal, social and cultural factors such as personality, expectations of the effects of intoxication, the need for an excuse for sexual behavior, the social context in which the substance use occurs and acquired cultural attitudes about alcohol, drugs and sex.[13]

Risk-Takers and Sensation-Seekers

People who abuse alcohol or use drugs may have personalities more prone to taking risks, making them more likely to have sex and less likely to have safer sex.[14] While few would suggest that cigarette smoking leads to sexual disinhibition or causes sexual activity, individuals who take the risk of smoking cigarettes (like alcohol abusers and drug users) are more likely than nonsmokers to be sexually active and to have multiple partners.[15] Among a

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sample of gay and bisexual men, having a "sensation-seeking" personality was the strongest indicator of having multiple sexual partners and using alcohol and drugs before engaging in sex.[16] People seeking other sensations, such as stress relief, social acceptance, self-esteem or relief from depression, may turn to both substance use and sexual activity.[17]

High Expectations

An individual's expectations of the effects of alcohol or drugs can influence sexual conduct and experience.[19] Individuals who expect alcohol or drugs to reduce social anxiety about having sex or increase sexual pleasure may be more likely to use substances generally and to use them in intimate situations.[20] Even when faced with evidence to the contrary, such expectations can prevail. Studies of diaries of sexual behavior found that even when the diarists' drinking was associated with less sexual activity, the diarists continued to believe that drinking enhanced their sexual desire and increased their sexual activity.[21] In a study of adolescents who had sexual intercourse, alcohol use at first intercourse and most recent intercourse predicted sexual risk-taking (i.e., failure to use condoms, failure to discuss risk-related topics) more strongly among those who expected that alcohol would promote sexual risk-taking than among those who did not hold such expectations.[22]

Expectations that alcohol increases sexual violence may be self-fulfilling.[23] Studies of rapists and child molesters find that those under the influence of alcohol during the commission of their crime were likelier to believe that alcohol increased sexual risk-taking, disinhibition and deviant sexual arousal.[24] Data are unavailable on how a user's expectations of the effects of illegal drugs might impact behavior.

The Excuse

Alcohol and drugs can be an excuse to engage in sexual behavior that is uncomfortable or legally, religiously or morally proscribed and to exercise less personal control over a situation.[25] In such circumstances, alcohol and drugs do not so much cause as allow individuals to be sexually disinhibited.[26] Individuals with a high degree of sexual anxiety or who for moral or religious beliefs hold themselves to more rigorous sexual norms may consciously or unconsciously use substances to provide an excuse for less inhibited behavior.[27]

Alcohol Is Used as an Excuse for Sexual Activity

I think [alcohol is] a pretty good excuse. You can say, 'I had sex with him, ***but****, I was drunk; so, I'm not really a slut.' So it's probably the best [excuse] you can give instead of saying, 'Oh, I slept with him because I felt like it.'*

--Female college student[18]

Substance use may be employed to excuse sexual violence or aggression.[28] Individuals may drink when they want to be sexually aggressive; some cite the use of alcohol or drugs prior to an incident of sexual violence in order to take less responsibility for their behavior.[29]

The Setting

Alcohol is often a traditional part of courtship and dating rituals and therefore is linked with sexual opportunity. In certain settings--bars, clubs, parties, dates--alcohol use may be seen as emblematic of sexual interest or availability[30] or a cue for sexual aggression.[31] Both excessive drinking and sexual assault are more likely to occur at night and alcohol-related sexual violence is more likely to occur on the weekend.[32] Individuals motivated to commit violence seek out locations and situations conducive to this activity, such as unsupervised locations where people are drinking or using drugs.[33]

Alcohol Is Linked to Sexual Manipulation

OK, from a guy's point of view, if you're out just looking for some fun, you know, you're going to buy a girl as many drinks as you can, to get her as off guard as you can. And you're going to try to have your way with her and be on your way.

--Young man[39]

Many individuals who use illicit drugs socialize in networks where they both buy drugs and meet new sexual partners. Some drug buying and using environments, such as crack houses[34] and night clubs where drugs are sold, facilitate sexual activity.

Popular Culture

While alcohol may relax certain social customs, it does so in a pattern that is socially and culturally approved.[35] Among students in college, high school, junior high and even younger grades, both males and females hold beliefs that there are times when it is acceptable for a man to force sex on a woman,[36] that male drinkers are more aggressive and female drinkers are more sexually available,[37] and that a drinking woman bears some responsibility for subjecting herself to sexual violence.[38] These beliefs reinforce the connection between substance use and sex.

A study linking music videos to teen drinking noted that:

Alcohol use is portrayed more frequently by more attractive, successful, and influential people in a positive social context, often associated with sexually suggestive content, recreation, or motor vehicle use.

Researchers also pointed out that alcohol use is rarely portrayed in an unattractive way or shown to have negative consequences.

--*CNN Interactive*
November 2, 1998[40]

Our understanding of sex and sexuality is influenced through images glorifying and employing sex in advertisements and entertainment. Not surprisingly, considering its availability and cultural status, no drug is more commonly linked by the media to sexuality and sexual activity than alcohol. Advertisements for alcohol (and tobacco) often are freighted with sexual innuendo.*

Seams Sexy

Dangerous curves are definitely ahead with a pair of thigh-highs. Shock the rest of him with a LIMON margarita.

--Bacardi Advertisement
Vogue, September 1999

Scenes of sex or seduction portrayed in movies and in music frequently involve drinking and smoking. In a study of 200 of the most popular movie rentals and 1,000 of the most popular songs in 1996 and 1997, 93 percent of movies depicted alcohol use and 22 percent illicit drug use.[41] Sexual activity was associated with alcohol use in 19 percent of the movies where alcohol was present; with illicit drug abuse in six percent of movies where drug use was portrayed. A clear reference to either alcohol or illicit drugs was found in 27 percent of the songs. Substance use was associated with sexual activity in 30 percent of the songs in which drugs were mentioned and 24 percent of the songs in which alcohol was mentioned.[42] Such characterizations not only reflect, but shape human behavior.

I really do appreciate the fact you're sittin' here
Your voice sounds so wonderful
But yer face don't look too clear
So bar maid bring a pitcher, another round o' brew
Honey, why don't we get drunk and screw.

--Performed by Jimmy Buffett
Song by Marvin Gardens (1973)

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* See Appendix B for samples of ads.

Religion

We have found no research on the impact of religion on the connection between substance use and sex or the varying strength of this relationship among different religious groups. However, religious involvement has been found to be a protective factor for both teen substance use and sex.[43] CASA's *Back to School 1999--National Survey of American Attitudes on Substance Abuse V: Teens and Their Parents* shows that teens who attend religious services at least once a week and consider religion to be important in their lives are 24 percent less at risk for substance abuse than the average risk for all teens.[44] Compared with teens who attend religious services less than once a month, those who go at least once a week are less likely to have used alcohol recently (nine vs. 21 percent), to have ever used marijuana (43 vs. 57 percent) and are more likely to say that they will never use illegal drugs in the future (56 vs. 15 percent). Religious experience may directly protect teens from substance use or indirectly influence use through other factors such as family closeness or respect for authority.[45] The National Survey of Adolescent Health, a longitudinal study of adolescents in grades seven through 12, found that greater personal importance ascribed by a teen to religion and prayer was associated with a somewhat later age of initiating sexual activity.[46]

High-Risk Populations

Teenagers

Teens who use alcohol and drugs are more likely to have sex, to have sexual intercourse at an earlier age and to have sex with more partners than are teens who abstain from substance use.[47] Inexperienced about both sex and substance use, teens may be less able than adults to manage the combination. Teens may be more likely to believe in the power of alcohol to reduce their inhibitions and relieve feelings of anxiety or guilt.[48] Among teens, both substance use and sexual activity occur in situations where adults are not present, possibly reinforcing the link between the two.[49]

Women

Women are more likely than men to report feeling sexually aroused while under the influence of alcohol, despite contradictory physiological evidence.[50] Women may hold higher expectations than men of alcohol's ability to enhance sexual pleasure.[51] Women are more likely to drink in order to provide an excuse for their sexual conduct or to relieve themselves of some responsibility for it.[52]

Drug-using women are more vulnerable than drug-using men to exposure to HIV and STDs due in part to their increased biological susceptibility to STDs and greater likelihood of asymptomatic infections.[53] Such women are likelier to have a sexual partner who injects drugs or has a history of other risky behaviors[54] and engage in prostitution to support drug addiction.[55]

Women who identify themselves as lesbian appear to use and abuse alcohol and drugs at rates at least comparable to heterosexual women.[56] Some lesbians have sex with men,[57] putting themselves at equal risk for HIV/AIDS or STD transmission or unintended pregnancy as heterosexual women. Like heterosexuals, lesbians addicted to substances may increase their risk by turning to prostitution to support their habits.[58]

When women are drinking or using drugs, they increase their vulnerability to sexual assault.[59] They are less able to defend themselves from attack;[60] they increase the chances that men will consider them sexually available[61] and are more likely to place themselves in sexually dangerous situations.[62] In fact, a vicious cycle of violence, substance use and repeated assault can occur in which abused women are susceptible to the lure of drugs and alcohol which in turn makes them more vulnerable to additional abuse which then leads to continued problems with substance use.

Gay and Bisexual Men

Gay and bisexual men are at higher risk for the negative consequences of mixing substance abuse and sex due to the potential for transmission of HIV through unprotected anal sex.[63] Research suggests lower rates of condom use associated with drug use in this population.[64]

Sex and Drugs Flourish at Circuit Parties

'A Circuit party gives us the chance to escape the pressures of our day-to-day existence and enter the altered world where man-to-man sex is not only accepted, but is celebrated' says the World Wide Web site of Circuit Noize, a quarterly magazine that critiques and publicizes the parties.

On the opposite side are other AIDS activists, gay men and epidemiologists who fear that the parties are symptomatic of a deadly new attitude that tolerates unsafe sexual practices and illegal drug use.

'The stories I hear horrify me,... You go there Friday night. You don't sleep Friday, Saturday, Sunday, and maybe even Monday. You use drugs. You have sex and then you have a hard time getting home...' said Betty Benson, a Los Angeles psychotherapist specializing in gay and lesbian patients.

--*Los Angeles Times*
October 13, 1997[65]

Alcohol and Drug Abusers and Addicts

HIV infection, STDs, prostitution and sexual abuse and violence are far more prevalent among drug and alcohol addicts and abusers than the general population (see Chapters IV and VI).

Prostitutes

The connection between substance use and sex among women and men who exchange sex for money or drugs is one of the strongest. Many women addicted to drugs become prostitutes to support their habits and most street prostitutes use and abuse drugs and alcohol.[66] With the advent of crack cocaine, the "sex for drugs" economy expanded sharply.[67]

The Chicken and Egg Syndrome

Teens who use and adults who abuse alcohol and drugs are more likely to participate in sexual activity, engage in risky sex and have multiple sex partners.[68] Teens and adults who have more frequent sex, risky sexual patterns and multiple partners are more likely to be substance abusers.[69]

Which comes first--sexual activity or substance abuse--depends on individual situations. Either way, the combination of sex with alcohol and drugs increases the chances that sexual behavior is risky and violent.[70] Suffering sexual abuse may be a precursor to substance abuse,[71] injection drug use,[72] promiscuity,[73] sexual violence[74] and teen pregnancy.[75] Substance abuse by either the perpetrator or victim can trigger sexual violence. Sexual relations with a substance user can serve as initiation into alcohol and drugs.[76] Whether prompted by social, moral or religious beliefs, the need to disinhibit anxiety, guilt or shame as a precondition to sexual activity may lead an individual to alcohol or drug use.[77] Sex addicts or individuals with sexual obsessions may turn to alcohol and drugs to deal with their psychological problems.[78]

CHAPTER II

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III. Alcohol, Drugs and Sexual Pleasure

Men and women often use alcohol and drugs to increase the chances of having sexual intercourse and use of these substances may produce the results they seek. But heavy use--or in some cases any use--of such substances is likely to reduce sexual performance and pleasure.* [1]

Alcohol and drugs can affect sexual performance and pleasure in three ways:

- by changing levels of certain neurotransmitters in the brain (especially serotonin, norepinephrine and dopamine) that are associated with pleasure, relaxation, pain relief, mood elevation or increased physical activity,
- by altering the release of hormones linked to sexual arousal,
- by altering blood flow or neural signals to or from the sex organs.[2]

Some effects are immediate, others chronic; they vary by drug. Chronic effects of alcohol and drugs on sexual function may occur indirectly, such as by causing depression that reduces sex drive. Chronic substance abusers often have multiple physical, behavioral and social problems that also affect sexual function.

Alcohol

Alcohol has detrimental effects on sexual potency and performance despite beliefs about its facilitating arousal.[3] Shakespeare captured this paradox in Macbeth: "[drinking] provokes the desire, but it takes away the performance."[4] Since the expectations of the drinker and the circumstances under which the drinking and sex occur affect alcohol's impact, assessments of the drug's pharmacological influence on sexual performance are difficult to make.

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* An overview of the basic physiological mechanisms of sexual function is provided in Appendix C.

In a survey, college students who are experienced drinkers perceive that alcohol:[5]

- *Impairs erection: 73% agree*
- *Reduces sexual inhibitions: 44% agree*
- *Increases sex drive: 27% agree*
- *Enhances sexual arousal: 24% agree*
- *Stimulates sexual activity: 13% agree*
- *Enhances sexual performance: 8% agree*

Alcohol is a central nervous system depressant that slows brain functioning, respiration and circulation.[6] Alcohol's depressive effect on the central nervous system may contribute to erectile and other sexual dysfunction, decreased vaginal secretions and reduced sexual response.[7] Sexual dysfunction is common among alcoholics and long-term heavy drinkers.[8]

> *I'm speaking out now in the hope that men with E.D. [erectile dysfunction] will get proper treatment for a condition that affects millions of men and their partners.*
>
> *Most E.D. cases are associated with physical conditions or events, like the prostate cancer surgery I underwent. The most common causes of E.D. include diabetes, high blood pressure, spinal cord injury, or surgery for the prostate or colon. E.D. can also be associated with smoking, alcohol abuse, or psychological conditions such as anxiety or stress.*
>
> --Bob Dole (1999)
> Pfizer TV advertisement for
> treatment of erectile dysfunction
> (Viagra)

More Alcohol Equals More Sexual Problems

Acute effects on men. Small amounts of alcohol (about one drink) administered to male college-aged students in laboratory settings are associated with greater self-reported arousal and sexual response. However, those given higher amounts of alcohol (about two drinks) showed significant decreases in arousal and impaired ability to ejaculate.[9]

Chronic effects on men. Long-term alcohol use directly or indirectly affects nearly every system in the body, including male sexual response.[10] Research on male alcoholics has found that greater quantity, frequency and duration of drinking is associated with impotence and sexual dysfunction.[11] Alcoholic men entering outpatient alcoholism counseling have exhibited more than three times the rate of serious impotence than demographically similar nonalcoholic men.[12] In one study, 84 percent of alcoholic men in treatment reported some sexual dysfunction related to heavy drinking.[13] Alcoholic men experience fewer, slower and less rigid nocturnal erections (an indicator of ability to achieve erection) compared to nonalcoholic men.[14] Chronic alcohol use has been found to lower testosterone levels and sperm count and is associated with shrinking testicles.[15]

The sexual problems related to chronic alcohol abuse persist. The percentage of alcoholic males in substance abuse treatment reporting sexual dysfunction in one study was not significantly reduced after nine months of abstinence.[16] While recovering alcoholics can reduce their experiences of impotence, more persistent problems and episodes of impotence are found among alcoholic than among nonalcoholic men, even after years of sobriety.[17]

Acute effects on women. Women's subjective estimates of their arousal and pleasure under the influence of alcohol are at odds with measured responses. They are likely to report greater arousal as blood alcohol levels increase.[18] However, studies of college women find that women's sexual arousal and ability to achieve orgasm decrease with increasing levels of alcohol.[19] Possible explanations for this discrepancy include high female expectations of the effects of alcohol, interpreting alcohol-induced body changes as sexual arousal or failing to measure accurately female arousal.[20]

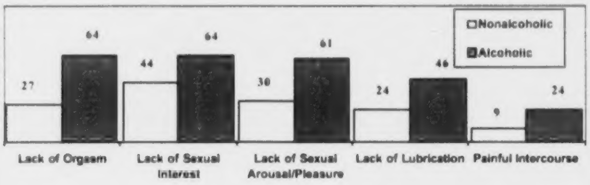
Chronic effects on women. Alcoholic women in recovery exhibit significantly higher incidences of sexual dysfunction (lack of sexual interest and arousal, absence of orgasm) than a comparable group of nonalcoholic women recruited from the same areas (see Figure 3.A).[21] Alcoholic women acknowledge considerable sexual dysfunction, yet often self-report greater desire for and enjoyment of sex after drinking.[22]

Sexual dysfunction is a risk factor for alcoholic women. Over a five-year period, sexual dysfunction was found the best predictor of the development of alcohol problems and alcohol dependence symptoms in women.[23] Given widespread notions that drinking reduces inhibitions and enhances pleasure, it is ironic that sexually dysfunctional women may try to self-medicate their problem with alcohol--and by doing so, aggravate their situation.

Chronic and heavy drinking by women can adversely affect reproduction by inhibiting ovulation, decreasing ovary mass and causing infertility, menstrual irregularities, early menopause and other obstetrical and gynecological problems as well as by damaging the fetus through fetal alcohol syndrome.[24]

Figure 3.A

Alcoholic and Nonalcoholic Women Who Report Sexual Dysfunction (by Percent)



Source: Covington, S.S. & Kohen, J. (1984). Women, alcohol, and sexuality. *Advances in Alcohol and Substance Abuse, 4*(1), 41-56.

Nicotine

Despite the Hollywood images of couples lighting up cigarettes after passionate sex, smoking is actually associated with decreased sexual and reproductive function. Lower testosterone levels have been found among men who smoke 20 or more cigarettes a day[25] and cigarette smoking has been associated with impotence or sperm abnormalities in men.[26]

The effects of smoking on women's sexual function, response or arousal have not been studied. However, cigarette smoking has a negative effect on female reproduction and is associated with reduced fertility and low birth weight babies.[27] Smoking increases the risk of ectopic pregnancy and spontaneous abortion.[28] It is associated with increased menstrual pain and depression.[29]

Marijuana

Particularly in the minds of users, marijuana is linked to enhanced sexual pleasure. In one study, more than 70 percent of users reported that marijuana was an aphrodisiac and 81 percent reported that it enhanced feelings of sexual pleasure and satisfaction,[30] probably due in part to the general enhancement of sensory experience.[31] Delta-9-tetrahydrocannabinol (THC), the primary active ingredient in marijuana, produces sedation, mild euphoria and mild analgesia (insensitivity to pain) and in high doses may intensify sensations or cause hallucinations.[32] While few studies have been done, those that exist show little physiological evidence that marijuana has an effect on libido or sexual function.[33] The specific effects of marijuana on brain chemistry are only recently beginning to be identified. As with other drugs, factors such as personality, lifestyle choices, physical and mental health status and expectations may explain differences between perceptions and documented effects.

Chronic marijuana smoking may damage the reproduction systems of men and women. Marijuana use by men has been found to lower sperm count and motility (spontaneous sperm motion).[34] Marijuana has been found to lower the level of testosterone and other hormones, but the long-term impact is uncertain.[35] As reported in CASA's White Paper, *Non-Medical Marijuana: Rite of Passage or Russian Roulette?*, marijuana smoking by pregnant women has been linked to low birth weight and premature birth.[36] CASA found no research on the effect of marijuana use on women's sexual function.

Cocaine

Cocaine Use Linked to Penile Injury

In some cases, cocaine abuse can cause priapism, a painful and dangerous condition in which prolonged erection leads to tissue damage in the penis, according to a report.

Three men ranging from age 38 to 49 came to an emergency department with priapism lasting from 24- to 96-hours.... Two of the three patients denied using cocaine ... but... test[ed] "strongly positive for cocaine."

One ... appears to be the first reported case of priapism associated with ... crack cocaine.

--*from Reuters Health*
May 17, 1999[37]

A central nervous system stimulant with anesthetic properties,[38] cocaine use increases levels of dopamine, serotonin and norepinephrine and is often linked to increased sexual desire or activity.[39] Increased dopamine levels are associated with feelings of pleasure, and have been found to cause sexual excitement in animals and increase their sexual behavior.[40]

Some initial and infrequent users of cocaine report that the drug has aphrodisiac qualities[41] and describe its effect as a "whole body orgasm." Cocaine's reputation as an aphrodisiac may be a function of its ability to increase dopamine levels. It also may be related to the fact that cocaine increases energy. Cocaine has been reported to induce spontaneous erection and ejaculation and facilitate multiple orgasms in some users.[42] Cocaine's local anesthetic effects (which numb sensation) can prolong arousal and delay orgasm, especially for males.

You take Sally and I'll take Sue
There ain't no difference between the two
Cocaine, runnin' all around my brain.

--Song performed by Jackson Browne

Crack and Sex[43]

There is definitely something about crack, something very sexual about it when you are smoking. When you're smoking you want to have sex, and when you're smoking sex seems to be better, stronger, with the crack high.

--Male crack user

When I first started smoking it, I'd go to a crack house, I would want to get laid. Then I got down to the last year-and-a-half of smoking it, I just didn't want to [have sex] anymore.

--Female crack user

These heightened sexual effects turn to sexual dysfunction with long-term use. The impact of cocaine on dopamine may eventually inhibit sexual arousal as repeated stimulation triggers dopamine deficiency.[44] Sexual arousal and desire may be inhibited by sleep and food deprivation and anxiety associated with chronic cocaine use. Many long-term male users of cocaine experience periods where they completely lose interest in sex. Many have difficulty maintaining an erection and ejaculating. Impotence and other problems may persist long after use has stopped.[45]

Alcohol abuse and addiction often accompany cocaine dependence with a serious adverse impact on sexual function. Among male abusers of both cocaine and alcohol in treatment, about two in three (62 percent) reported some sexual dysfunction, including 62 percent reporting decreased libido; 52 percent, impotence; 38 percent, anorgasmy (inability to achieve orgasm); 30 percent, delayed ejaculation; and eight percent, premature ejaculation.[46]

Among women, chronic cocaine use can contribute to difficulty in achieving orgasm.[47] Long-term use may adversely affect a woman's reproductive system.[48] Cocaine-abusing women in residential treatment have exhibited more frequent and severe symptoms throughout their menstrual cycles than a comparison group of noncocaine-abusing women.[49]

In the popular culture, crack cocaine is even more tightly linked to heightened sexual activity than powder cocaine. Much of this has to do with widespread sex-for-crack prostitution.[50] Crack use has been found often to diminish desire and impair ability to have sex and to achieve orgasm (see Table 3.1).[51]

Table 3.1

Effect of Crack Use on Desire and Ability to Have Sex Among Male and Female Crack Users

When using crack:	Percent
Desire for sex:	
More	37
Less	57
Physical ability to have sex:	
More	29
Less	56
Physical ability to orgasm:	
More	24
Less	63

Source: Weatherby, N.L., et al., (1992). Crack cocaine use and sexual activity in Miami, Florida. *Journal of psychoactive drugs 24*(4), 373-380.

Amphetamines

Amphetamines, including methamphetamine, are stimulants often associated with sexual activity. In fact, methamphetamine use has been more closely related than drugs such as heroin and cocaine to having more sexual partners, sex with injection drug users and unprotected sex, and to contracting STDs.[52] Amphetamines are similar to cocaine in their effects on the brain, stimulating release or blocking reabsorption of dopamine and norepinephrine.[53] Some amphetamine users report that the drug increases libido, delays orgasm or prompts multiple orgasm; others report difficulty in achieving orgasm.[54]

Meth, Sex and Addiction

'At first,' says Dawn, who used to smoke at least 1/2 gram [of methamphetamine] a day, 'there is the sex element. Then ***it*** *is your sex, your lover.'*[55]

Methamphetamine use, notably through injection, is often associated with increased sexual response. Some male methamphetamine users report spontaneous erections upon injection.[56] Some report increased desire for sexual intercourse, but inability to achieve full erection.[57] At high doses and with chronic use, amphetamines can cause impotence and delay ejaculation in men and orgasm in women.[58] As with cocaine, chronic amphetamine use can reduce libido and arousal.[59] However, methamphetamine-using men appear to have erections and orgasms longer into their use of the drug than cocaine users.[60]

Sex-related use of methamphetamine appears most common among gay men, particularly in the western United States. By simultaneously increasing libido and impairing erection, methamphetamine has been described as a drug that creates "instant bottoms" (men who are only the receptive partner in anal sex).[61] Its use is associated with unprotected receptive anal sex with multiple partners.[62]

Opiates

Opiates (such as opium, morphine, heroin, methadone and codeine) are central nervous system depressants that relieve pain and cause sedation.[63] Opiates act on a variety of neurotransmitters in the brain, including endorphins, morphine-like substances produced naturally in the body. Endorphins are involved in a number of functions including modulating mood (e.g., the runner's high) and relieving pain. Acute effects of opiates include lack of pain perception, euphoria and relaxation.[64] Opiates are thought to redirect blood away from the genitals, which may contribute to sexual dysfunction.[65] Long-term use of opiates can impair testes and ovaries.[66]

In small doses, heroin may prompt arousal and enhance sexual performance. Users sometimes describe the euphoria that follows heroin use in sexual terms and equate the rush to an orgasm.[67] Due to its ability to delay orgasm and its relaxing and analgesic effects, heroin is sometimes used to self-medicate for sexual dysfunctions such as premature ejaculation in men or pain during intercourse in women.[68] Heroin may also suppress testosterone production[69] and may lead to decreased sexual desire. Larger doses and chronic use diminish sex drive, contribute to impotence and interfere with ejaculation and orgasm.[70] Decreased libido and problems with erection, ejaculation and orgasm have been found in methadone users.[71]

Volatile Nitrites (Poppers)

Volatile nitrites such as amyl nitrite (once available over-the-counter for heart conditions but transferred in 1968 to prescription drug status by the Food and Drug Administration (FDA)) and butyl nitrite (once marketed in room fresheners but banned from such use in 1988 by an act of Congress)[72] have been used to enhance sexual pleasure, particularly by men who have sex with men.[73] Commonly referred to as "poppers" (they originally came in glass ampules which were broken open by hand and then inhaled), these drugs are also known as "rush," "locker room" and "thrust." Volatile nitrites relax smooth muscles of the anal sphincter, thus facilitating anal sex, and produce a throbbing rush and brief euphoria. Some users take poppers in order to prolong orgasm or the sensation of orgasm.[74] Volatile nitrite use can be associated with erectile dysfunction.[75]

Gay men who use volatile nitrites have been found to have more sexual partners and engage in more high-risk sex.[76] In one study of gay men, 69 percent had used nitrites.[77] Most used them during sexual activity (only 13 of 55 users reported nitrite use at other times and such use was usually while dancing).[78] Nitrite users often use alcohol and other drugs, particularly marijuana.[79]

Psychedelics/Hallucinogens

Lysergic Acid Diethylamide (LSD)

LSD, the best known and most powerful synthetic hallucinogen, increases the activity of serotonin, which helps calibrate pain perception, mood, attention and sleep.[80] We have found no studies on the effect of LSD on sexual function.

MDMA (Ecstasy)

Ecstasy Continues to be a Club Drug

> *Ecstasy is a hybrid of the stimulant methamphetamine and the hallucinogen mescaline. It was synthesized more than 80 years ago as an appetite suppressant.... The compound was banned in 1985 after truck drivers began using it as a stimulant. Ecstasy still has a following in the all-night club scene....*
>
> --*The New York Times*
> October 30, 1998[81]

In the late 1960s and the early 1970s, Ecstasy--MDMA, 3,4-Methylene-dioxymethamphetamine--was labeled the "love drug" and alleged to produce a sensual/sexual euphoria.[82] In one study, most MDMA users reported that the drug provided an enhanced pleasure in touching and physical closeness rather than a sexual experience. Men and women typically complained of impeded erections and orgasms.[83] Heavy MDMA users have suffered a decrease in brain cells responsible for reabsorbing serotonin,[84] which can trigger anxiety and depression[85] that can be associated with sexual dysfunction.

Phencyclidine (PCP)

PCP is not associated generally with sexual activity, although episodic use of small doses has been reported to enhance sexual desire or performance.[87] One study of PCP users who sought drug detox treatment found that a small sub-population of gay men used PCP for its pain-reducing, disinhibiting and fantasy-enhancing qualities in order to facilitate sexual practices such as fisting (placing the hand of one man into the rectum of the other).[88] Heavy or long-term use of PCP impairs higher brain functions (e.g., thinking, perception, reasoning) and decreases sexual desire.[89] Chronic users of PCP often develop depression and cerebral dysfunction that may decrease sexual function.[90]

Ketamine

Like PCP, ketamine, often dubbed "Special K," makes the user feel disassociated from his or her body and environment and can produce hallucinations and amnesia.[92] Ketamine is used clinically as an anesthetic or sedative. Ketamine has been found to prevent or impair erections, although the specific mode of action for this effect is not clear.[93] In response to more than 500 reports of the sale and/or recreational use of ketamine by minors, on college campuses and at nightclubs and rave parties, the Justice Department classified "Special K" as a Schedule III controlled substance effective August 12, 1999.[94]

Gamma Hydroxybutyric Acid (GHB)

GHB, a dopamine enhancer and central nervous system depressant, is used by young people in nightclubs and at raves (all night dance parties) for euphoric and aphrodisiac effects.[95] Street names for GHB include "liquid G," "liquid X," "liquid ecstasy" and "cherry meth." Once available at health food stores as an alternative to steroids, in 1990 the FDA banned such use of the drug in response to reports of GHB-induced seizures and comas.[96] According to the U.S. Drug Abuse Warning Network, GHB-related emergency room visits have jumped from 20 in 1992 to 629 in 1996.[97] GHB is particularly dangerous when used in combination with methamphetamine, which can lead to increased risk of seizure, or alcohol, which can cause nausea and difficulty in breathing.[98] GHB has been linked to date rape.[99]

> *Katie Williams had taken the so called 'date rape drug' a couple of times before and it was fun. It packed a quick, euphoric punch that made her feel good. But when she took [GHB] at a house party,...it nearly killed her.*
>
> *Williams was found semi-comatose in the bathroom of a...grocery store around 7:45 p.m., not far from the teen party....*
>
> *...Rushed to Centura Littleton Adventist Hospital...She stopped breathing...and was placed on a ventilator.*
>
> *Williams awoke from her coma about 2:30 a.m....and...was sent home. Williams said that she will never touch any type of drug again, including marijuana.*
>
> *'I just want people to know that it's (GHB) a really dangerous drug,' she said. 'There's a fine line between getting messed up and overdosing.'*
>
> --*The Denver Post*
> April 1, 1999[86]

> **Drugs and Partying Among Gay Men**
>
> *[Gay fund raising events to fight AIDS are] known as 'circuit parties' because they are linked by similar music and because some ...attract the same...crowd, lavishly muscled and wealthy enough to buy plane tickets and plenty of drugs like cocaine, Ecstasy, and ketamine, or 'special K....'*
>
> *The array of chemicals taken by at least a few of the men ... has expanded recently to include a liquid anesthetic, gamma hydroxybutyrate, or GHB, that has been implicated in a string of medical emergencies at circuit parties this year. GHB is extolled by some as an aphrodisiac.*
>
> --*The New York Times*
> September 8, 1998[91]

Gamma butyrolactone (GBL), another drug alleged to enhance sexual pleasure and function, is taken orally and is converted in the body to GHB. Also known as Renewtrient, Revivarant, Blue Nitro, Vitality, Gamma G and Remforce, GHB has been available over-the-counter at health food stores, gyms and on the Internet as a diet supplement that claims to aid sleep, enhance physical performance and sexual pleasure, build muscle, reduce stress and reduce wrinkles. In January 1999, the FDA called for a voluntary recall of GBL and warned consumers to not take the drug.[100] As of that date, the FDA reported at least 55 cases of GBL-associated adverse health effects, including one death.[101]

Prescription Drugs

Research on the impact of legal or prescription drugs on sexual function has focused on therapeutic use under the guidance of a medical professional rather than abuse. Most of the research has been conducted on men and does not necessarily predict the impact on women.

Anabolic-Androgenic Steroids

Anabolic steroids mimic the male hormone testosterone and the effects of human growth hormone produced by the pituitary gland.[102] Steroid use is most prevalent among male and female athletes and bodybuilders to improve performance or appearance by increasing muscle mass or heightening levels of aggression or confidence. Teenage boys use steroids to quicken physical development.

The effects of steroids on sexual function have not been studied carefully and self-reports of steroid users are inconsistent, citing both increased and decreased libido and impotence in men.[103] We have found no research on the impact of steroid use on female sexual function.

Male steroid users often experience testicular shrinking and lack of spermatozoa in the semen. In women, anabolic steroid use leads to masculinization, deeper voices, increase in bulk and size of the clitoris, breast shrinkage, menstrual irregularities, acne and excessive body or facial hair.[104] In contrast to the side effects that occur in men, these effects on women are largely irreversible.[105]

Antipsychotics and Antidepressants

Antipsychotic drugs, such as Mellaril and Prolixin, may diminish the sex drive, increase erectile dysfunction and impair orgasm by lowering dopamine levels in the brain[106] or otherwise affecting the hypothalamus, the area of the brain that controls sexual hormones and other aspects of sexual function.[107] Some antipsychotics block or impair erection by reducing blood flow to the genitals.

Antidepressants (such as Elavil and Prozac) have been associated with decreased erection, ejaculation and orgasm.[108] Diminished blood flow induced by antidepressants may decrease erection and ejaculation in men and decrease vaginal engorgement and orgasm in women.[109] These drugs act on the central nervous system by increasing levels of neurotransmitters such as norepinephrine or serotonin[110] in order to elevate mood and alleviate depression. Because lack of sex drive is a symptom of depression, it can be difficult to distinguish the psychological and pharmacological affects of antidepressants on libido.

Benzodiazepines

Benzodiazepines are sedative-hypnotic prescription drugs used to reduce anxiety (such as Valium and Xanax) or as a short-term treatment for insomnia (such as Restoril or Halcion).[111] As a result of their depressant effects, benzodiazepines decrease spinal reflexes and transmission to peripheral nerves that can decrease erection, orgasm and vaginal secretions.[112]

Ten times more potent than Valium, Rohypnol (flunitrazepam) is one of the strongest of benzodiazepines and leads to extreme disinhibition and severe memory impairment.[113] Rohypnol is marketed in many countries for the treatment of insomnia but is not legal in the United States or Canada.[114] Rohypnol, referred to as "roshay," "roofies," "roche," "rope" or "the forget pill," has been linked to acts of sexual violence in situations where the drug is slipped covertly into the victim's drink in order to induce sedation, psychomotor impairment, disinhibition and memory loss. Because of these reports, the drug was reformulated to emit a blue dye as it dissolves in liquid and to dissolve more slowly. There have been reports of the use of Rohypnol as a "party drug" to induce relaxation and disinhibition.[115]

> *[Rohypnol] has gotten popular faster than any other drug we've seen. It's cheap, it's readily available and it's got a pretty good kick. And I guess the euphoric effects outweigh not being able to recollect details of the previous night.*
>
> -- California Deputy District Attorney
> *Los Angeles Times*, April 11, 1999[116]

Viagra

Viagra, known generically as sildenafil, is the widely advertised drug to treat impotence. It increases release of the common body chemical nitric oxide, which leads to smooth muscle relaxation and greater blood flow into the genitals in response to sexual stimulation.[117] There have been reports that Viagra is being used as a "club drug" to enhance sexual desire and pleasure, often in conjunction with alcohol or stimulant drugs.[118] Use of Viagra with poppers is particularly troubling as both cause blood vessels to dilate which could prompt a dangerous drop in blood pressure, possibly leading to heart attack or stroke.[119]

Poly-Substance Use

Studies examining the impact of substance use on sexual function rarely consider the effects of the combined use of alcohol and drugs or the use of multiple drugs. This is a crucial limitation as most illicit drug users also use alcohol and many use more than one illicit drug.[120] It is likely that poly-substance use compounds and worsens problems of sexual function.

CHAPTER III

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IV. Alcohol, Drugs and Sexual Activity

Alcohol and drugs have an intimate relationship with dangerous sexual activity. Individuals who use alcohol and drugs are more likely to initiate sex at earlier ages, have more sexual partners and more casual sex partners, and have sex with higher risk partners. Problem drinkers and drug users have higher rates of STDs and HIV/AIDS. Poor and inconsistent condom use compounds the risk of the alcohol/drug-sex connection.

Prevalence

Most adults use alcohol and well over half (see Table 4.1) have used it in the past month. About a quarter of adults between the ages of 18 and 34 binge drink.[1] Most adults are also sexually active: among a large national sample of adults age 18 to 59, 90 percent of men and 86 percent of women had sex in the past year.[2] Thirty percent of men and 29 percent of women had sex two or three times a week in the past year. While many people have had sex under the influence of alcohol, only about nine percent of men and six percent of women said that they usually or always drank before or during sex.[3]

Illicit drug use is much less common (see Table 4.1) than alcohol use and its connection to sex is much more difficult to measure. One man in 100 and one woman in 200--some two million Americans--admit using drugs prior to having sex in the past year.[4]

Involvement in risky sexual behavior is highest among people who have problems with both drugs and alcohol or who use multiple drugs.[5] One study found that alcoholics who also have drug problems are much more likely than those who do not to have sex with a nonprimary partner, to have sex with multiple partners, to be HIV-positive, to have a history of STDs, to have traded sex for money or drugs and to not use condoms.[6]

Table 4.1

Most Americans Drink Alcohol and Many Americans Have Used Drugs, 1998 (Percentage by Age Group)

Age:	18-25	26-34	35+
Alcohol Use			
Ever	83	88	87
Past month	60	61	53
Binge [a]	32	22	12
Heavy [b]	14	7	4
Drug Use (ever)			
Any illicit drug [c]	48	51	32
Marijuana and hashish	45	48	29
Cocaine	10	17	10
Crack	3	4	2
Inhalants	11	9	4
Hallucinogens	17	13	8
Heroin	1	1	1

[a] Binge drinking is having five or more drinks on the same occasion at least once in the past 30 days.

[b] Heavy drinking is having five or more drinks on the same occasion on five or more days in the past 30 days.

[c] Any illicit drug indicates lifetime use at least once of marijuana/hashish, cocaine (including crack), inhalants, hallucinogens (including PCP and LSD), heroin, or any nonmedical use of prescription-type psychotherapeutic drug.

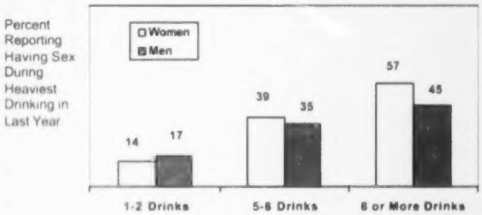
Source: Department of Health and Human Services, SAMHSA, Office of Applied Studies. (1999). *Summary of findings from the 1998 National Household Survey on Drug Abuse.* Rockville, MD: Department of Health and Human Services.

Increased Consumption of Alcohol Equals Increased Sexual Activity

As the level of alcohol use increases, so does the level of sexual activity (see Figure 4.A). Among young adults (age 18 to 30) asked about sex during their heaviest drinking episodes in the last year, 35 percent of men who had five to eight drinks had sexual intercourse and 45 percent who had eight or more drinks had sexual intercourse, compared to 17 percent who had sexual intercourse when consuming one or two drinks. The relationship is even stronger for young women. Thirty-nine percent reporting on their heaviest drinking episode in the past year said they had sexual intercourse when consuming five to eight drinks and 57 percent with eight or more drinks, compared to 14 percent who had sexual intercourse when consuming one or two drinks.[7] This association holds across a wide variety of populations--young adults, African-American women and gay men.[8]

Figure 4.A

As the Amount of Alcohol Consumed Increases, So Does the Likelihood of Sexual Activity (Age 18 to 30)



Source: Graves, K.L. (1995). Risky sexual behavior and alcohol use among young adults: Results from a national survey. American Journal of Health Promotion, 10(1), 27-36.

Early Initiation of Sexual Activity

Early use of alcohol and drugs is part-and-parcel of early initiation of sexual activity.[9] The younger and more often a teen uses alcohol and drugs, the greater the likelihood of early initiation of sexual activity, even after controlling for sociodemographic factors, family structure, biological maturity and other personal characteristics.[10] This link between alcohol and drug use and early initiation of sexual activity is discussed in more detail in Chapter V.

Multiple Sex Partners

Alcohol and Multiple Sex Partners

Those who drink at least monthly, get drunk and binge drink are more likely to have sex with multiple sexual partners (see Table 4.2).[11] As drinking amount and frequency of alcohol consumption rise, so does the likelihood of having more than one sex partner.[12]

For persons age 18 to 30, binge drinkers are twice as likely those who do not binge drink to have had two or more partners in the prior year after controlling for other demographic factors such as age, sex and marital status and for drug

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use.[1] [13] Among adults (age 18 and older), heavy drinkers[2] are five times likelier than nonheavy drinkers to have sex with at least 10 partners in a year.[14] These relationships between alcohol consumption and multiple sexual partners have been found among college students,[15] teens,[16] men and women in treatment for alcohol problems,[17] African-American women[18] and gay men.[19]

Table 4.2

Alcohol Use is Associated with a Greater Number of Sexual Partners (Aged 18 and older)

	Percent having two or more sex partners in previous 12 months:
Frequency of drinking:	
Never	7
Yearly	7
Monthly	15
Weekly	24
Average quantity consumed:[a]	
None	7
1 – 2	10
3 or more	29
Frequency of drinking to intoxication:	
Never	7
Yearly	16
Monthly	39
Frequency of binge drinking:[b]	
Never	7
Yearly	18
Monthly	40
Weekly	41

[a] Per drinking episode.

[b] Binge drinking was defined as five or more drinks at a sitting.

Source: Leigh, B. C., Temple, M. T., & Trocki, K. F. (1994). The relationship of alcohol use to sexual activity in a U.S. national sample. *Social Science and Medicine, 39,* 1527-1535.

Drugs and Multiple Sex Partners

Illicit drug users are more likely than nonusers to have multiple sex partners. This connection holds true for the general population with the use of more ubiquitous drugs such as marijuana as well as among users of drugs like crack and heroin.

One Woman's Typical Day in a Two-Week Crack Binge

> *I'd screw anybody I could for however many bucks they had until I got enough for a half or so. Then I would sit back at a motel and get high. Then I'd run back out on the street to get money for crack any way I could. During the process I would be steadily drinkin' wine and takin' downers to bring me down.*
>
> *--This woman estimated that she had six or seven sex partners a day during a recent binge.*[20]

More than three times the number of young adults in one study who used marijuana in the past year than those who did not had sex with two or more partners during that time period (52 percent to 16 percent).[21] Other studies find drug (particularly crack) use to be related to an increased number of sexual partners in a variety of populations, including injection drug users[22], female crack users,[23] drug-using African-American females,[24] African-American crack-using male teens,[25] HIV-positive homosexual men[26] and male and female STD clinic patients.[27] One study found that 37 percent of crack users who had never injected drugs reported more than 100 lifetime sexual partners, compared to only three percent of those who had not used drugs or used (noninjection) drugs other than crack.[28]

---

[1] In this survey, binge drinking was defined for both men and women as having five or more drinks on one occasion.

[2] In this survey, heavy drinking was defined for both men and women as ever having had 20 or more drinks in one day; or two weeks of daily drinking at least seven drinks; or at least two months of drinking seven or more drinks at least once a week.

Casual Sex Partners

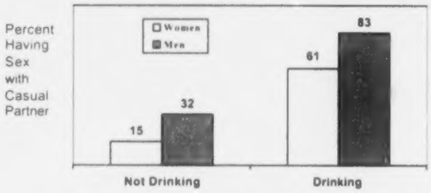
Sexually Transmitted Diseases in America

- With approximately 15 million new cases occurring annually, rates of curable STDs (e.g., chlamydia, gonorrhea and syphilis) in the United States are the highest in the developed world.[29]
- At least one person in four will contract an STD at some point in his or her life.[30]
- Some three million cases of chlamydia occur each year.[31]
- At least 650,000 cases of gonorrhea occur each year.[32]
- As of 1995, 31 million Americans were infected with genital herpes; about 1,000,000 new cases occur each year.[33]
- By 1995, 24 million people were infected with human papillomavirus (genital warts) and up to 5.5 million new cases occur each year.[34]
- Long-term complications of STDs include infertility, ectopic pregnancy, spontaneous abortion, cancer and other chronic diseases.[35]
- People with STDs are three to five times likelier to contract HIV.[36]
- The direct annual medical costs of STDs (not including HIV or AIDS) are estimated to exceed $3.8 billion in 1998.[37]

Alcohol use is associated with sex with casual partners[3] or people not well known to the drinker. Individuals who have intercourse with a new, casual or other nonprimary sexual partner and those involved in an unexpected sexual event are more likely to drink just before or in conjunction with sex than those having sex with a regular partner--boyfriend, girlfriend or spouse.[38] For young adults who reported sex with a new partner in the past 12 months, alcohol use (on average 2.6 drinks for men and 1.4 for women) was associated with a greater likelihood of having sex with a casual partner and individuals known to that person for a short length of time (see Figures 4.B and 4.C).[39]

Figure 4.B

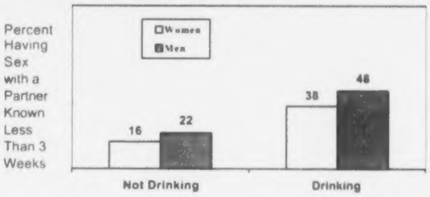
Alcohol Use Associated With Having Sex With Casual Partner*



* Source: Graves, K.L. (1995). Risky sexual behavior and alcohol use among young adults: Results from a national survey. American Journal of Health Promotion, 10(1), 27-36.

Figure 4.C

Alcohol Use Associated With Having Sex With Partner Known Less Than 3 Weeks*



* Alcohol use during the most recent time the respondent had had sex with a new partner in the previous 12 months.
Source: Graves, K.L. (1995). Risky sexual behavior and alcohol use among young adults: Results from a national survey. American Journal of Health Promotion, 10(1), 27-36.

Sex with strangers and nonprimary partners is common for many drug abusers and addicts, often because of the connection between drug use and prostitution.[40]

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[3] A casual sexual partner was defined as someone just met, a friend or acquaintance. A primary or committed sexual partner was defined as a steady boyfriend/girlfriend, fiancée/spouse, cohabiting partner or an individual otherwise identified as a main partner.

Drinking, A Love Story

One morning you wake up and open your eyes. Your head feels like it weighs way too much, so much it hurts to move: you feel a throbbing behind one of your eyes, or in your temple.... Inside, everything feels jittery and loose, like a car with bad wiring.

Next to you in the bed is a man. Perhaps you know him, perhaps you don't.

You experience a moment of disoriented panic--what happened? exactly what happened?--and you take a quick inventory. Are you naked? Clothed? Is there any evidence of birth control? An empty condom wrapper, your diaphragm case lying on the floor? You close your eyes: you want to pretend to be sleeping in case he stirs; mostly, though, you want to collect your thoughts, try to patch the evening back together.

Bits and pieces come to you. You remember the early part of the evening clearly, the first few drinks, the way you started to loosen up. Perhaps you remember dancing, or sitting in a corner with this man... Then things start to get a little blurred. You remember laughing: you were making jokes, or laughing at his jokes. ...

The sex, if you remember it, was disconnected and surreal. Your body did what it was supposed to do, or at least you think it did: all you have are tiny, discrete images.... ...throwing your head back in pleasure even though you didn't really feel pleasure, even though you didn't really feel much at all. And then the mind goes blank. You don't remember the rest....

You lie there with your eyes closed. All you want to do is get out, just get out and go home and take a shower and get all of this out of your mind, shove it straight back into history.

--Excerpt from*Drinking, A Love Story*
by Caroline Knapp[41]

Alcohol, Drugs and STDs

To the extent that substance users are more likely to have sexual intercourse with multiple partners, casual acquaintances and other substance users, given that adults and teens are inconsistent condom users, their risk of STD transmission increases. STD prevalence rates among alcoholics and crack users range from 30 percent to 87 percent, compared to approximately 1.6 percent among the general population of adults.[42] For chronic users and addicts, vulnerability to STDs may be even greater because long-term abuse of alcohol and use of drugs such as opiates, cocaine, ecstasy, marijuana and barbiturates is associated with damage to the immune system.[43]

Alcoholics and addicts may remain infected with an STD for longer periods due to less prompt medical treatment. They may ignore symptoms until they become increasingly severe--leading to greater health problems and even permanent damage. Untreated STDs can have serious medical consequences, especially for women and for babies infected during the birth process. STDs that damage the lining of the mouth and genitals, such as chlamydia, herpes, syphilis, and gonorrhea, increase the risk of HIV transmission. Infertility can be a consequence of chlamydia in men and women and gonorrhea in women. Human papillomavirus is associated with increased risk of cervical cancer.[44]

Heavy Alcohol Users Have Higher STD Rates

Adults who drank to intoxication in the last year are nearly twice as likely as those who did not to have had an STD.[45] Problem drinkers are three times likelier than nondrinkers, nonproblem drinkers and nondrug users to contract an STD (see Figure 4.D).[4] [46] Projecting these findings to the national population: among 25 million adult Americans estimated to be problem drinkers, some five million would have contracted a STD; among the same number of adults without drinking problems, only one and a half million would have contracted an STD.[47] A survey of San Francisco Bay Area households found problem drinkers to be four and a half times more likely than others to report STDs.[48]

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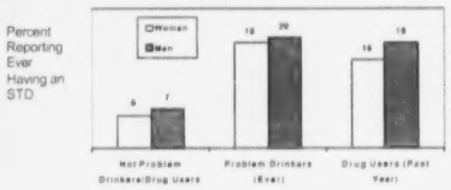
[4] Problem drinking was defined as ever having had three of eight major symptoms indicating an increased tolerance for alcohol, an increased desire for alcohol, impaired control over drinking, symptoms of withdrawal and increased social disruption.

Drugs Users Often Have STDs

Men and women who use illicit drugs have almost three times the risk of nonusers of having contracted an STD (see Figure 4.D).[49] STDs are common among crack and other cocaine users, and crack/cocaine users are more at risk for STDs than nonusers or users of other types of drugs.[50] Crack and other cocaine users appear to be at particularly high risk for contracting syphilis.[51] This connection is especially dangerous because syphilis is associated with the transmission of HIV.[52]

Figure 4.D

Sexually Transmitted Disease Is More Common Among Problem Drinkers* and Drug Users



* Problem drinking was defined as ever having had three of eight major symptoms indicating an increased tolerance for alcohol, an increased desire for alcohol, impaired control over drinking, symptoms of withdrawal and increased social disruption.

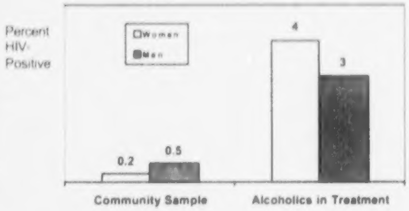
Source: Ericksen, K.P., & Trocki, K.F. (1994). Sex, alcohol and sexually transmitted diseases: A national survey. *Family Planning Perspectives*, 26, 257-263.

Alcohol, Drugs and HIV/AIDS

HIV (human immunodeficiency virus), the root cause of AIDS, is the most deadly sexually transmitted disease. HIV is found in the blood, semen and vaginal secretions of an infected person. The virus is spread by unprotected sexual intercourse or needle-sharing with someone who is infected or, infrequently, through transfusions of infected blood. Babies of HIV-infected women may be born infected.[53]

Figure 4.E

HIV Rates Are High Among Alcoholics*



* Noninjecting heterosexuals

Source: Avins, A.L., Woods, W.J., Lindan, C.P., Hudes, E.S., Clark, W., Hulley, S.B. (1994). HIV infection and risk behaviors among heterosexuals in alcohol treatment. *Journal of the American Medical Association*, 271(7), 515-518.

While rates of HIV in the general population are estimated to be less than one percent,[54] estimates of HIV among alcohol abusers and noninjecting drug addicts range from three percent to more than a third.[55]

Alcohol and HIV/AIDS

Alcohol-abusing men are six times likelier and alcohol-abusing women are 20 times likelier than individuals in the general population to be HIV-positive (see Figure 4.E).[56]

While the impact of alcohol on the immune system of light or occasional drinkers is unknown, the impact on heavy drinkers can be considerable. Alcohol abuse weakens the body's mechanisms for destroying viruses and is associated with increased vulnerability to HIV infection and more rapid development of AIDS-related illnesses.[57]

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Drugs and HIV/AIDS

Not only do many drug users place themselves at risk for HIV through use of injection drugs, but they also place themselves at risk due to their participation in sex with other drug users, with multiple partners and with casual partners, perhaps in exchange for money or drugs. The Centers for Disease Control and Prevention (CDC) report that 85 percent of all AIDS cases to date stemming from heterosexual contact have been due to sexual activity with an injection drug user.[5] [60] In the most recent CDC HIV/AIDS surveillance report, there were 4,199 new reported cases of AIDS from July 1997 to June 1998 where the primary exposure category was drug-related sex (out of a total of 54,022).[61] At an estimated lifetime medical cost (in 1998 dollars) of $78,000 for AIDS cases, these 4,199 new cases from a one-year period will result in a cost to society of some $328 million.[62]

> *Baltimore has by far the country's highest rate of syphilis, at more than 30 times the national average, and the city blames the use of crack cocaine and trading drugs for sex.*
>
> --*Los Angeles Times*
> December 8, 1998[63]

A significant number of crack users are infected with HIV;[64] in one study 7.5 percent of crack smokers tested HIV-positive[65] compared to less than one percent in the general population.[66] Crack users are vulnerable to transmission because of their high-risk sexual activity.[67] Men in crack houses often report that they can achieve climax only after prolonged intercourse or extremely vigorous masturbation. Such contact can result in vaginal, anal or penile bleeding--increasing the potential for transmission of HIV. Women in crack houses may have sex with many partners with little or no time between each, increasing the chances of male-to-male transmission of HIV due to exposure of one man to the semen of another.[68] Untreated STDs, prevalent among many crack users, also increase the risk of HIV due to exposure through skin and tissue damage in the genitalia caused by the STD.[69]

HIV and AIDS: Definitions of Terms

HIV Infection. Infection with the retrovirus Human Immunodeficiency Virus Type 1 that results in a gradual deterioration of the immune system by killing immune cells known as CD4+ T cells. HIV is the virus that causes AIDS.[58]

Acquired Immunodeficiency Syndrome (AIDS). The Centers for Disease Control and Prevention define AIDS as the presence of HIV infection in which (1) the CD4+ T cell count is below 200 or represents less than 14 percent of the total lymphocyte count or (2) the presence of one of a number of opportunistic infections such as recurrent pneumonia, pulmonary tuberculosis, Kaposi's sarcoma or invasive cervical cancer.[59]

Oral sex is the most common service exchanged for crack.[70] Long episodes of oral sex due to a crack-using man's delayed ability to orgasm can cause abrasions on the penis and in the mouth that increase the risk for HIV transmission.[71] Lesions on the lips and tongue of the addict due to crack pipe burns further heighten that risk.

Because other drugs such as amphetamines and nitrites have been reported to increase sex drive and delay ejaculation, their use may be associated with longer lasting and rougher sexual activity. This increases the possibility of physical trauma during sex and heightens the chances of contracting HIV.[72]

Alcohol, Drugs and Condom Use

Alcohol and Condom Use

Common sense suggests an individual high on alcohol is less likely to use a condom when having sexual intercourse. Surprisingly, the findings in this area are mixed.[73] Of 30 studies examined--including teens, college students, adults and gay and bisexual men--10 found an association between alcohol use and failure to use condoms,[74] 15 found no association[75] and five found mixed evidence.[6] [76]

---

[5] In which the risk factor through heterosexual exposure was known.

> *I think that there are definitely intentions of safer sex. But when you're drunk, you get carried away and one thing leads to another. And before you know it, just because your thought processes are a little slower than your actions, you [say], 'Wait! What's happening? I'm not in control anymore.' ...even though you have the best of intentions...you just get so caught up or carried away that your brain is lagging behind what you [did] three minutes ago. And now, all of a sudden, 'Oh my God! I hope...Please don't let me catch AIDS.'*
>
> --Female college student[83]

Studies may be mixed on the impact of drinking on condom use because individuals are generally poor condom users whether they drink or not.[77] Overstating condom use while drinking or sober could also reduce the reported impact of alcohol. Among one sample of college students, every woman said that she would practice safe sex regardless of whether drinking or not,[78] but in another sample, only 17 percent of sexually active college women said they always use condoms.[79]

Drugs and Condom Use

Studies of high-risk groups tend to show a link between drug use and reduced condom use. One study found female crack users average 10 incidents of unprotected sex in the prior 30 days.[81] In a sample of male and female injection-drug users, more than two-thirds reported never using condoms.[82]

Condom Use Low Among Drug Using Women

Ethnographic interviews in a city jail with 23 crack-using women reporting multiple sexual partners found that these women often did not use condoms and that they cared more about maintaining sexual relationships with men and obtaining drugs than protecting themselves against HIV.[80]

Several studies suggest that gay and bisexual men who use drugs are more likely to engage in risky sexual behavior including failure to use condoms.[84] Drug use by homosexual males while having sex has been found the strongest predictor of sexual behaviors considered at high risk for the transmission of HIV, including having anal intercourse without a condom.[85]

Alcohol, Drugs and Unintended Pregnancy

One-half (49 percent) of all pregnancies in the United States in 1994 were unintended (unplanned or undesired).[7] [86] Among white women, 43 percent of all pregnancies were unintended; among African-American women, 72 percent; and among women of other races, 50 percent.[87]

Teens Say...

Percent of teens who say teenage girls have unplanned pregnancies because:	
Teenagers don't think they'll get pregnant:	62
Teenagers have sex when they are drunk or on drugs:	55
Teenagers don't have birth control with them when they want to have sex:	46
Boys don't like to use birth control:	42
Teenagers don't know the right way to use birth control:	26
Girls don't like to use birth control:	21
It's too hard to get birth control that works and is easy to use:	19

Source: Princeton Survey Research Associates. (1996). *The 1996 Kaiser Family Foundation Survey on Teens and Sex: What they say teens today need to know and who they listen to: Chart Pack*. Menlo Park, CA: The Henry J. Kaiser Family Foundation.

Fifty-five percent of teens say that sex while drinking or on drugs is often a reason for unplanned teenage pregnancies.[88]

---

[6] For an identification of studies of the connection between alcohol and drugs and condom use, see Appendix D.

[7] The latest available published data.

Alcohol or drug use and unintended pregnancies often occur together.[89] White women who had ever used illicit drugs other than marijuana have been found four times more likely than women who never used drugs to have a premarital teen pregnancy.[90] In Ohio, high school girls who had tried cocaine were found nearly five times likelier to have experienced an unintended pregnancy than peers who had not.[91]

CHAPTER IV

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[12] Involvement with multiple sex partners takes two forms: serial monogamy, where the individual has consecutive partners that do not overlap; and non-monogamy, which involves sex with more than one partner during the same time frame. Most available data do not distinguish between the two, and while having more than one sex partner is not in itself necessarily high-risk behavior, inconsistent use of condoms could mean that sexual contact with more partners can increase the risk of HIV or other sexually transmitted disease.

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V. Alcohol, Drugs and Sex Among America's Teens

In order to assess the association between adolescent substance use and sexual activity, CASA conducted an extensive new analysis of data from the 1997 Youth Risk Behavior Survey (YRBS), a sample of more than 16,000 high school students mostly between the ages of 15 through 19, and from the 1995 National Longitudinal Study of Adolescent Health (Add Health), a sample of more than 18,000 students mostly between the ages of 12 through 20.[*] [†] [1] Since these are self-reported data on use of alcohol and illegal drugs and sexual activity, actual use and activity are likely underestimated.

The conclusions raise deeply troubling concerns about substance use and teen sexual activity: teens who use alcohol and drugs are more likely to have sexual intercourse, to have it at earlier ages and to have more sexual partners.

Teens are more vulnerable to the combined lure of sex and alcohol and drugs: they are less able to cope with the consequences of substance use that can undermine decisions to abstain from sex and trigger irresponsible and dangerous sexual behavior that can change the course of their lives. For parents, the point is not which comes first, sex or drugs, but that regardless of the sequence, either may be a red flag for the other.

Teen Sexual Activity

In 1997, more than half of teens had had sexual intercourse; 58 percent of boys and 51 percent of girls.[2] Thirty-five percent had sexual intercourse at age 15 or younger.[3] More than a quarter of 15- to 16-year-olds and more than half of 17-to

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[*] For discussion of sample characteristics, methodology, and variable and measurement descriptions of the YRBS and Add Health surveys, see Appendix E. See Appendix A for a discussion of data limitations.

[†] Unless otherwise noted, the tables in this chapter are from CASA's new analysis of the 1997 YRBS and the 1995 Add Health surveys.

18-year-olds consider intercourse an acceptable part of dating for their age group (see Table 5.1).[4]

Table 5.1
By Age 17, Intercourse is an Accepted, if not Expected, Part of Dating Relationships

Percent of teens who say it is typical for dating couples their age to have sexual intercourse:		
Age:	13 – 14	4
	15 – 16	28
	17 – 18	52

Source: Henry J. Kaiser Family Foundation & YM Magazine. (1999). *1998 National Survey of Teens: Teens talk about dating, intimacy, and their sexual experiences.* Menlo Park, CA: Kaiser Family Foundation.

Intercourse is not the only sexual activity that might be affected by substance use, nor is it the only one carrying risk. In a sample of more than 2,000 high school students, 47 percent (940) reported that they had never engaged in vaginal intercourse, but more than an additional 16 percent (329) had participated in other sexual activity, including mutual masturbation, oral sex and anal intercourse.[5]

Teen Alcohol and Drug Use

CASA's analysis shows that almost 80 percent of high school students have experimented with alcohol at least once. Half had at least one alcoholic drink in the past 30 days; 46 percent of teens are frequent drinkers and 28 percent have engaged in binge drinking in the past 30 days (see Table 5.2).[6]

More than half has used at least one illicit drug; a quarter reported frequent drug use and 12 percent admit heavy recent use of marijuana or cocaine (see Table 5.2).[7] While drug use among teens and use at earlier ages had been increasing from 1991 through 1996, there is some encouraging evidence of a slight decline in use in 1998.[8]

Table 5.2
Percentage of High School Students Who Use Alcohol and Drugs

Ever used alcohol	79
Drank alcohol in past 30 days	51
Frequent drinkers (10+ days of drinking, lifetime)	46
Binge drinkers (5+ drinks on one occasion, last 30 days)	28
Ever used drugs	52
Frequent drug users (Any drug 20+ times, lifetime)	24
Heavy recent drug users (marijuana and/or cocaine, 10+ times, past 30 days)	12

Sex and Drugs May Be Red Flags For Each Other

CASA's first level analysis of high school teens in the YRBS sample found that 63 percent of those who use alcohol and 70 percent of those who are frequent drinkers have had sex, compared to 26 percent of those who never drank. Seventy-two percent of teens who use drugs and 81 percent of those who use them heavily have had sex, compared to 36 percent of teens who never used drugs (see Table 5.3).

Table 5.3
Percentage of High School Students Who Have Had Sexual Intercourse by Alcohol and Drug Use

Never drank	26
Drank alcohol	63
Frequent drinkers[a]	70
Never used drugs	36
Drug users	72
Heavy drug users[b]	81

[a] Frequent drinkers are those who drank on 10 or more days in their lifetime.

[b] Heavy drug users are those who used any drug 20 or more times in their lifetime.

One in five sexually active teens reported using alcohol and/or drugs at the time of last sexual intercourse.[9] Males were significantly more likely than females to have used alcohol/drugs during last sex.

After CASA adjusted for the influence of age, race, gender and parents' education level, high school students who report drinking on at least one occasion are actually seven times more likely than nondrinkers to have had sex;[11] those who have ever used drugs are five times more likely than those who never used drugs to have had sex.[12] Teens under 15 who ever drank are twice as likely as those who have not to have had sex; those who have ever used drugs are almost four times as likely as those who have not used drugs to have had sex.[13]

Often teens report that their first sexual experience was one they did not plan or foresee, but rather that "just happened."[14] Up to 18 percent of adolescents were drinking at the time of their first intercourse.[15] Other studies show that for adolescents who had never had vaginal intercourse, use of alcohol or marijuana doubled the likelihood of engaging in mutual masturbation and tripled the likelihood of engaging in oral sex.[16]

Among a sample of more than 1,700 adolescents age 11 to 17, drug use was considerably more likely to precede sexual activity than sexual activity was to precede drug use.[17] Compared to those who had sex prior to initiating drug use, five times as many females and over twice as many males initiated drug use prior to sexual intercourse. When either teen sex or substance use starts, regardless of which comes first, the other frequently follows.[18]

Early Initiation of Sexual Activity

CASA's analysis did not permit an independent examination of the relationship between alcohol and drug use and early initiation of sexual activity, but other research finds that alcohol and drugs are implicated in early onset of sexual activity.[19]

Some teenage girls contend – as they have for decades – that alcohol lets them duck responsibility for having sex. In 'Venus in Blue Jeans,' psychologist Nathalie Bartle cites a survey of 750 girls between the ages of 12 and 19; almost 90 percent cite drinking as a major factor leading to sex.

'Girls are forfeiting their own decision-making processes to the whims of alcohol,' she wrote, 'and in an odd twist, they feel that drinking allows them to retain some self-respect if they do have sex.'

--Star Tribune (Minneapolis, MN)
January 30, 1999[10]

Adolescents are initiating sex at ever younger ages. Fifteen-year-old females reporting sexual intercourse increased from less than five percent in 1970 to 21 percent in 1995 and males from 20 percent in 1972 to 27 percent in 1987.* [20] CASA's analysis of the YRBS data suggests that the percent of 15-year-olds who have had sex continues to rise--in 1997, 38 percent of 15-year-old girls and 45 percent of 15-year-old boys reported having had sexual intercourse.[21] †

After about two years of doing drugs, Melissa [16 years old] looked in the mirror one day and realized she was falling apart.

Her friends who took drugs were a mess. She had one friend on cocaine who became pregnant and had an abortion.... Worst of all, a childhood friend had to be put in a mental institution because of drugs. At this point, Melissa finally realized, 'Wow, this could happen to me. I want to get off.'

--The Network for Family Life Education at
Rutgers University[22]

Students who initiate sexual intercourse are more likely to be drinkers than those who do not initiate sexual intercourse. Forty-five percent of teens in one study who had sex were found to drink, compared to 29 percent of those who did not have sex.[23] Another study of individuals under 21-years-old found that the earlier a teen initiates sex, the more likely he or she is to begin using alcohol or marijuana.[24] Men and women who first have sex at age 16 or younger are more likely than others to have used marijuana or other illicit drugs, to have used drugs more frequently and to be current users.[25]

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* The latest available numbers from this data set.

† The YRBS data set uses different survey administration techniques and a different sample population than other reported data, making direct comparisons problematic.

Other studies have found that the higher the stage of alcohol or drug involvement and the earlier the reported onset of drug use, the greater the probability of early initiation of sex.[26] Young people who use one or more substances at an early age are more likely to become sexually active within a year than those who do not use any substances.[27] One study showed that among those who initiated alcohol use prior to age 14, 20 percent had sex at 14 or younger compared to only seven percent of those who had not initiated alcohol use at such a young age.[28]

The More Alcohol and Drugs, the More Sex Partners

CASA's analysis of high school students found a strong association between those teens who report ever using alcohol or drugs and having sexual intercourse with four or more partners. Thirty-nine percent of sexually active teens who report ever using alcohol have had sexual intercourse with four or more individuals, compared with 29 percent of those who never drank. For those who have used drugs, 44 percent report having had sexual intercourse with four or more partners compared with 24 percent who have not used drugs.[29]

After controlling for the influence of age, race, gender and parents' education level, teens who drink are twice as likely to have had four or more sex partners in their lifetime and teens who use drugs are three times likelier to have had four or more sex partners compared to nonusing teens.[30] The YRBS data did not permit an analysis of whether substance-using teens have multiple sex partners simultaneously or sequentially.

This relationship works in both directions. Not only are alcohol- and drug-using teens more likely to have sex with a greater number of people, the more sexual partners a teen has, the more likely they are to use substances and to have alcohol and drug problems.[31]

Teens are Poor Condom Users With or Without Alcohol and Drugs

CASA's analysis of high school students found that sexually active teens who use alcohol and/or drugs are somewhat less likely than nonusers to have used a condom at their last sexual intercourse. Sixty-eight percent of nondrinkers and 64 percent of nondrug users reported using a condom compared to 58 percent of both drinkers and drug users. After controlling for age, race, gender and parents' education level, these differences were found not to be statistically significant.[32]

Katie, 14, started doing drugs a year ago.

First she tried weed, then she went to acid and then cocaine.... She didn't think that drugs were going to solve her problems, but they seemed like a good escape.

Katie kept sniffing coke and dropping acid, until she made a mistake that she regrets deeply. Katie lost her virginity while she was stoned.

That's when it hit. She had to get off drugs. She stopped hanging out with the old buds and started hanging with a new group of drug-free friends. ... The friends who really cared about her helped her stay clean.

Katie's advice to other teens: 'If you want to have fun, find something else to do. Don't do drugs. It's just not worth it.'

--The Network for Family Life Education
at Rutgers University[33]

The Lost Children of Rockdale County

NARRATOR: A story of lonely kids desperate to belong [and] ...an outbreak of syphilis in a middle-class, largely white...suburb of Atlanta...
PROFESSOR: Kids of parents who put in 40, 60, 80-hour work weeks and were doing that to insure that all the resources that they wanted to give their children were available.
PARENT: She goes up to her room and either takes her school books and studies or watches whatever T.V. channel she can pick up for the evening. I usually go in mine. ...I would put on the radio, or I have my – a laptop from work. I'll go to my bedroom and do some work and have my dinner in there.
NARRATOR: There were lots of parties, anywhere that adults weren't around, empty homes... the parents were off and gone ...a lot of sexual activities with multiple partners, a lot of risky sexual activities.
NURSE: Young girls, some 13 years of age... with 20, 30, 40, 50 or 100 sex partners. ...These girls were not just having regular intercourse, they were having every kind of possible sexual act that you could do.
YOUNG BOY: Everybody'd get drunk ...one girl would come in the group and she'd be passed around, or one guy would go in the girls' group and get passed around.
YOUNG BOY: ...the game is, you have to imitate what the Playboy people are doing,
PROFESSOR: ...[including] ...the sandwich ...one girl having oral sex with one of the men, having vaginal sex with another man and having anal sex with a third.
YOUNG GIRL: [The boys] didn't treat us like we were anything real important. The girls seemed not to care ... I think most of it was the alcohol they were buying because the guys always bought alcohol.
COUNSELOR: I've observed girls in a structured group with a counselor who have been involved in sexual activity. They know they have done something wrong, but they don't know how they would have stopped it, and they don't know how they would stop it the next time that it comes around.
MINISTER: They don't see it. It's them. It's the parents. They have done this.

--Excerpts from transcript of
a TV broadcast, *Frontline*, October 19, 1999

While the percentage of sexually active teens using condoms has increased over the last decade--from 47 percent in 1988 to 60 percent in 1995 among females and 55 percent in 1988 to 69 percent in 1995 among males[34]--condom use by adolescents remains inconsistent at best. Only about half of sexually active teens were found in several studies to have used a condom at last intercourse.[35] There is some evidence that teens who use alcohol or drugs are less likely to use condoms than nonusing teens;[36] however, the findings are inconclusive.[37]

To the extent that substance use is implicated in increased sexual activity and since teens are inconsistent condom users, unintended pregnancy, STDs and HIV/AIDS may follow. Among teenage girls (age 15 to 19), 103 per 1,000 had a pregnancy in 1995, down from 117 per 1,000 in 1990.[38] Births to teenage girls also declined to 51 births per 1,000 girls in 1998 from 62 per 1,000 in 1991.[39] However, births to unmarried teenage girls have risen slightly, from 40 births per 1,000 unmarried girls in 1990 to 42 per 1,000 in 1998.[40] Sexually active female teens have been found to have the highest rates of chlamydia and gonorrhea, higher than older women.[41] An estimated one in 10 female teens has chlamydia[42] and one in 100 has gonorrhea.[43]

In 1998, it was estimated that of the 15.3 million new cases of STDs,* 25 percent or 3.8 million cases were among teens age 15 to 19.[44] At an average annual medical cost of $179 per case, these teen STDs cost some $680 million to treat in 1998 alone.[45] Since teens who use alcohol are seven times likelier and teens who use drugs are five times likelier to be sexually active and at greater risk for STDs, preventing substance use would yield considerable savings in medical costs and human misery.

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* Excluding HIV and bacterial vaginosis.

CHAPTER V

REFERENCES

[1] The YRBS and Add Health data-sets are among the few available that ask young people about substance use, sexual activity, condom use, and the link between substance use and sex. Because they are both school-based samples, students who were absent or who dropped-out were not included. As these students represent some of the most at-risk teens, findings from these analyses should be viewed critically and may not be generalizable to all adolescents. Additionally, social desirability and confidentiality concerns may prevent adolescents from truthfully disclosing their actual levels of substance use and risky sexual activity. For discussion of sample characteristics, methodology, and variable and measurement descriptions, see Appendix D.

[2] CASA analysis of data from the 1997 Youth Risk Behavior Survey.

[3] CASA analysis of data from the 1997 Youth Risk Behavior Survey.

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[6] CASA analysis of data from the 1997 Youth Risk Behavior Survey.

[7] Of these, eight percent used marijuana alone and four percent used both marijuana and cocaine; virtually no students used cocaine without also using marijuana during this time period. CASA analysis of data from the 1997 Youth Risk Behavior Survey.

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[12] CASA analysis of data from the 1997 Youth Risk Behavior Survey.

[13] A third of the Add Health sample are 14 or younger, compared to 10 percent of the YRBS sample. According to our analysis of the Add Health data, the substance-use/sexual activity odds ratios for 15 – 16 year olds were 1.9 for alcohol users and 4.3 for drug users. For teens 17 and older, 1.7 for alcohol users and 4.0 for drug users. CASA analysis of data from the 1995 Add Health Survey.

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VI. Substance Abuse and Sexual Violence

To better understand the relationship between substance abuse and sexual violence, CASA conducted original national analyses of the link between substance abuse and sexual violence among arrestees and inmates. We examined the 1991 Bureau of Justice Statistics Survey of Prison Inmates[*] and the 1997 National Institute of Justice Arrestee Drug Abuse Monitoring (ADAM) Program.[†] [‡] We have combined these analyses with other data on victims' reports of alcohol- and drug-related sexual violence and self-reports of substance abuse among those on probation for crimes of sexual violence.[§] Our findings show that substance abuse is the dark shadow behind many crimes of sexual violence: date and acquaintance rape, rape of strangers, violence among intimate partners and child molestation.

Rape and Sexual Assault

Alcohol

Alcohol is more closely associated with crimes of sexual violence than any other drug.[1] While estimates vary (from 30 to 90 percent of rapists were drunk at the time of the offense[2] and 40 to 63 percent of rapists are alcoholics[3]), alcohol plays a major role whether we look at victim reports of rapes or self-reports of arrestees, inmates or probationers.

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[*] See Appendix G for information on the CASA analysis of data from the Bureau of Justice Statistics 1991 Survey of State Prison Inmates. All estimates of the numbers of prison inmates who are sex offenders are based on the CASA analysis of the 1991 survey, projected to the total state prison population in 1998. The 1991 Prison Inmate survey is the most recent one available for analysis.

[†] See Appendix F for further information on the CASA analysis of data from the National Institute of Justice 1997 Arrestee Drug Abuse Monitoring Program.

[‡] Unless otherwise indicated, tables in this chapter are derived from these analyses.

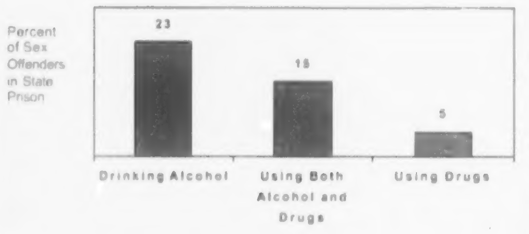
[§] These findings are complicated by problems with the validity of self-reported assault data and of conflicting definitions of sexual assault.

> *Two days after Christmas and while attending a party at Brookfield hotel, ... [a] 21-year-old attacked a female hotel clerk and tried to rape her. Later, he said he was drunk and that his friends made a bet with him on whether he would do it.*
>
> *Two weeks later, [he] broke into a strangers home. The homeowner said she awoke to find him standing over her bed touching the inside of her leg. Again he fled.*
>
> *On March 10, he was arrested after running naked through a women's locker room at the YMCA in downtown Waukesha. He told police then that he hid there to peer at the women while they showered.*
>
> *He said he used to act out sexually only when he was drunk but now had little control over himself.*
>
> --*Milwaukee Journal Sentinel*
> November 7, 1998[4]

In 213,710 (43 percent) of the estimated 497,000 incidents in 1998 of victim-reported rape and sexual assaults (including those not reported to the police), the victim reported that the offender was under the influence of alcohol and/or drugs (see Table 6.1).[5] Alcohol, alone or in combination with other drugs, was involved in at least 37 percent of these cases. Alcohol was likely involved in a number of the 34 percent of cases where it was not determined whether the perpetrator used a substance.

Figure 6.A

Substances Used by Incarcerated Sex Offenders During Their Crime



In one study of arrestees, alcohol was present in 34 percent of forcible rapes.[6] In most (more than 60 percent) of these alcohol-involved rapes, both the rapist and the victim had been drinking prior to the offense. In more than a quarter of them, only the victim was drinking.[7]

Table 6.1

Substances Used in Victim Reported Rape/Sexual Assault

Victim perceived that the offender was using:	Number	Percent[a]
Alcohol and/or drugs	213,710	43
Alcohol alone	149,100	30
Alcohol and drugs	34,790	7
Drugs alone	19,880	4
Drugs or alcohol	9,940	2
Unable to determine if a substance was used	168,980	34
No substance use	119,280	24

[a] Does not add to 100 percent due to rounding.

Source: Greenfeld, L.A. (1998). *Alcohol and crime: A national data on the prevalence of alcohol involvement in crime.* Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

CASA's analysis of self-reports of incarcerated sex offenders finds that 38 percent reported that they were under the influence of alcohol: 23 percent (26,660) alcohol only and 15 percent (17,380) alcohol and drugs (see Figure 6.A).[8] Use of alcohol alone is more common than the single use of other drugs such as cocaine or heroin.

Drugs

Estimates of drug involvement in rape and sexual violence range from 13 to 42 percent.[9] Low estimates are self-reports of victims; mid-range estimates are self-reports of inmates and probationers; high estimates are urine tests of arrestees. Drugs are probably involved in a much larger percentage of rapes, since many assaults by drug-using men are likely against drug-using women who may be more reluctant to report the crime. For example, three of 10 African-American crack-using women interviewed in one study reported that they had been raped by crack-using men.[10] Since these women felt that there was no recourse, most of these assaults went unreported.

> *An 18-year-old Hartland man sexually assaulted a woman after he spent an evening using alcohol and cocaine, according to a criminal complaint.*
>
> *Although [the man] initially denied the attack, he later allegedly told police he 'had been using cocaine and alcohol and that what she was saying was probably true simply because he did not remember everything.'*
>
> --*Milwaukee Journal Sentinel*
> August 12, 1998[11]

Almost 20,000 (four percent) of the 497,000 victims in 1998 of rape or sexual assault reported that their assailant was using drugs alone (see Table 6.1). Another 34,700 victims (seven percent) report he was using both drugs and alcohol, and another 9,900 (two percent) believed he was using drugs or alcohol but were unable to determine which.[12] Altogether, at least 54,700 (11 percent) victims of rape and sexual assault believe that they were assaulted by a perpetrator who was using drugs or drugs and alcohol.[13]

CASA's analysis of arrested sex offenders reveals significantly higher rates of drug involvement than victim reports suggest. Forty-two percent of those arrested for sex offenses tested positive for drugs at arrest (see Table 6.2):[14] 14 percent tested positive only for marijuana; 28 percent for drugs other than or in addition to marijuana. Cocaine was second only to marijuana in prevalence of use among arrestees--one of five men arrested for a sex crime tested positive for cocaine.[15]

CASA's analysis of inmate self-reports reveals that one in five sex offenders in state prison was under the influence of drugs during his crime--five percent of drugs alone and 15 percent of both drugs and alcohol (see Figure 6.A).[16] Nine percent of sex offenders in state prison report that they were under the influence of cocaine (including crack) during their offense; only two percent reported being under the influence of crack (see Table 6.3).[17] Sex offenders in prison are less likely than other violent criminals to be under the influence of drugs during their crime.

Table 6.2

Percentage of Sex Offender Arrestees Who Tested Positive for Drugs by Drug Type [a]

Any drug	**42**
Marijuana only	**14**
Any drug, excluding marijuana only	**28**
Total using:	
Marijuana	24
Cocaine	21
Amphetamines	4
Opiates	3
Benzodiazepines	2
Phencyclidine (PCP)	1

[a] These percentages cannot be added because of overlap. Arrestees interviewed and drug tested through the Alcohol and Drug Abuse Monitoring Program represent approximately three percent of the arrestees that come through the selected jails during the data collection period. However, there is considerable variation in this percentage across the sites.

One-third of sex offenders admitted to using drugs in the month prior to their offense, including 18 percent who were using drugs other than marijuana (see Table 6.3);[18] 15 percent report that they had used cocaine in the month prior to their offense; four percent reported using crack in the month prior to their offense. Very few sex offenders in state prison report use of methamphetamines, amphetamines, heroin or other drugs.[19]

Eleven percent of adults on probation in 1995 for sexual assault reported using drugs at the time of their offense.[20]

Table 6.3
Percentage of Incarcerated Sex Offenders Reporting Drug Use During the Month Prior to and at the Time of Their Offense[a]

	Used during the month prior to offense	Under the influence at the time of the crime
Any drug	**33**	**20**
Any drug, excluding marijuana only	**18**	**14**
Marijuana	28	14
Cocaine (other than crack)	11	7
Amphetamines (speed)	5	2
Crack	4	2
Methamphetamine (ice/crank)	3	1
Barbiturates (downers)	2	1
LSD	2	1
Heroin	2	1
PCP	1	1

[a] These percentages cannot be added because of overlap.

Alcohol, Drugs and Date Rape

Date rape, including acquaintance rape, is probably more widespread than suggested by official rates because of a reluctance by many victims to report the incident to authorities.[21]

Alcohol and Date Rape

CASA's review of data on sexual dating violence collected from college students reveals that alcohol is the chief culprit in date rape on America's campuses. At one midwestern college, 21 percent of female and 23 percent of male subjects reported that opposite sex dates used alcohol or drugs to obtain unwanted sexual intercourse.[22] More than half of the women (59 percent) at another college experienced some incident of sexual assault since age 14 and one-fourth (26 percent) of the men there admitted committing a sexual assault.[23] Most of these sexual assaults occurred during a date. In 46 percent of these date assaults, the victim, the perpetrator or both admitted drinking.[24] In another survey, three-quarters of female college students subjected to rapes by dates or acquaintances were drinking at the time of the incident.[25]

Using a broader definition of sexual violence, 78 percent of undergraduate women experienced sexual aggression (any unwanted sexual contact, from kissing to intercourse) and over half of the men (57 percent) reported being sexually aggressive.[26] Dates marked by sexual aggression were far likelier to include heavy drinking or drug use than their most recent reported date that did not involve sexual aggression (see Table 6.4).

Women in sororities are more likely than those not so involved to report being taken advantage of sexually as a consequence of their drinking. Greater involvement in sorority life has been associated with greater likelihood of being the victim of alcohol-related sexual violence.[27]

Table 6.4
Intoxication is Common in Sexual Aggression on Dates

	Women[a]		Men[a]	
Percent reporting heavy alcohol or drug use by:[b]	Most recent date (no sexual aggression)	Date characterized by sexual aggression[c]	Most recent date (no sexual aggression)	Date characterized by sexual aggression[c]
Self	5	21	14	26
Partner	6	21	12	27

[a] Total numbers in sample: 341 women, 294 men.

[b] Used alcohol or drugs and acted/felt moderately to extremely intoxicated.

[c] Sexual aggression includes any sexual activity, from kissing to intercourse, unwanted by the woman.

Source: Muehlenhard, C.L., & Linton, M.A. (1987). Date rape and sexual aggression in dating situations: Incidence and risk factors. *Journal of Counseling Psychology, 34*(2), 186-196.

> *A chiropractor from Northern California, facing charges of having sex with several minors and providing them with illegal drugs, money and pornography, was arrested... at a West Hollywood bank....*
>
> *[He] was wanted by police in Orinda, an upscale community east of Berkeley, where he allegedly provided drugs to several high school students and had sex with them. He also allegedly photographed the students in sexual acts.*
>
> --*Los Angeles Times*
> January 5, 1998[28]

Drugs and Date Rape

In recent years, the use of certain drugs to disable a potential sexual assault victim has captured media attention.[30] Flunitrazepam (Rohypnol) has come to be known as a "date rape drug."[31] A federal law banned the drug in 1996 and a 20-year sentence was mandated for anyone caught using Rohypnol to commit rape.[32] Most reported instances of Rohypnol rape come from the South and Southwest.[33] Gamma hydroxybutyric acid (GHB) is also considered a date rape drug. GHB has no approved uses in the United States and many states have established stiff penalties for those convicted of possession or distribution.[34]

Hoffman-LaRoche, the company that makes Rohypnol, commissioned a study* of urine samples of sexually assaulted individuals who believed they had been drugged prior to their attack. Fewer than one percent of 1,891 urine samples tested positive for Rohypnol and three percent tested positive for GHB while 41 percent were positive for alcohol, 18 percent for marijuana, 14 percent for other benzodiazepines and eight percent for cocaine (see Table 6.5).[35]

Table 6.5

Alcohol is More Common Among Rape Victims Than "Date Rape Drugs"

(Percent of positive tests for each substance)[a]

Alcohol	41
No substance found	39
Marijuana	18
Other Benzodiazepines	14
Cocaine	8
Amphetamines	7
GHB	3
Opiates	3
Darvon	1
Barbiturates	1
Rohypnol	[b]
Phencyclidine (PCP)	[b]

[a] Results of testing on urine samples for 1,891 people who believed they were drugged and sexually assaulted and were submitted by law enforcement agencies, hospitals, university health centers and rape crisis centers (June 1996-January 1999). Samples may test positive for more than one substance.

[b] Less than one percent.

Source: Roche Pharmaceuticals[29]

Alcohol, Drugs and Violence Among Intimate Partners

Substance use, particularly alcohol use, is the norm in violence between individuals involved in intimate relationships--current or former spouses, boyfriends or girlfriends.[37] In 1996, women experienced an estimated 840,000 rapes,

> *Rock superstar Eric Clapton has admitted...that he was so addicted to alcohol and drugs that he sexually abused his wife.*
>
> *In an interview with The Sunday Times...he revealed that when he was a 'full-blown practising' alcoholic 'there were times when I took sex with my wife by force and thought that was my entitlement. I had absolutely no concern for other people.'*
>
> --The *Ottawa* Citizen
> *June 27, 1999*[36]

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* Unpublished study conducted by ElSohly Laboratories, Oxford Mississippi. A previous review that also examined these data (prior to the inclusion of testing for alcohol) reported similar drug test results. (See Saum, C. A. (1998). Rohypnol: The date-rape drug? Pages 245-261 in J. A. Inciardi, & K. McElrath (eds.), *The American drug scene* (2nd ed.). Los Angeles, CA: Roxbury Publishing.)

Table 6.6

Percentage of Victims Who Believed the Offender was Using Alcohol or Drugs[a]

	Offender was using:			
Victim-offender relationship	Alcohol only	Drugs only	Drugs and alcohol[b]	Neither
Intimate[c]	55	9	12	25
Nonmarital relative	38	14	12	36
Acquaintance	28	9	10	52
Stranger	24	6	7	63
All victims of violence	28	7	9	56

[a] Among those victims who indicated that they were able to report whether alcohol or drugs had been used by the offender. Based on average annual reported victimizations from 1992 to 1995. Does not add to 100 percent due to rounding.

[b] Either the offender was using both alcohol and drugs or the victim was unable to tell which substance was being used.

[c] Includes current or former spouse, boyfriend and girlfriend.

Source: Greenfeld, L.A. (1998). *Alcohol and crime: A national data on the prevalence of alcohol involvement in crime.* Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

sexual assaults, robberies, aggravated assaults and simple assaults at the hands of a spouse or other intimate partner.[38] Three-quarters (76 percent) of individuals who were victimized at the hands of an intimate partner report that the offender was under the influence of a substance during the crime; more than half (55 percent) under the influence of alcohol alone (see Table 6.6).[39]

It is estimated that at least half of women who experience intimate violence do not report it to the police[40] because they view it as a private or personal matter, fear offender retaliation, do not expect the police to respond or themselves are drinking excessively or using illegal drugs.

Alcohol, Drugs and Sexual Abuse of Children

Estimates of the extent of alcohol involvement in cases of child sexual abuse range from 30 to 40 percent of reported cases[41] to self-reports that 65 percent of incarcerated incest offenders were drinking at the time of the offense.[42] The extent of drug involvement in cases of child sexual abuse is unknown.

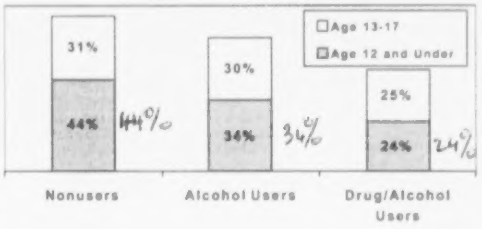
Alcohol is used by some individuals who commit acts of pedophilia.[43] Alcohol or other drugs are also used to lure children into vulnerable situations.[44]

More than half (59 percent) of sex offenders victimized a person under the age of 18 and 31 percent victimized an individual under age 13[45] (see Table 6.7).[46] Incarcerated sex offenders who use alcohol or drugs are less likely to have victimized someone under the age of 13 than nonusers; 34 percent of those who use alcohol and less than a quarter of drug/alcohol-using sex offenders victimized a child compared to 44 percent of nonusers (see Figure 6.B).[47] Nonusers and alcohol users are more likely than drug/alcohol-using sex offenders to have victimized their own child or step-child.[48]

> *The link between alcohol and crime is real and too often ignored or brushed under the carpet. A review of several studies with varying estimates leads to the conclusion that alcohol is involved in more than 66 percent of the nation's homicides, 50 percent of rapes, and up to 70 percent of sexually aggressive acts against children and assaults. Many New York City police officers believe that the most dangerous call they receive concerns the fight between husband and wife aggravated by drinking. In such situations, alcohol is the deadly wapon that threatens the safety and lives of the police.*
>
> --The 1982 Report on Drug Abuse and Alcoholism, The Official Report to the Governor of New York[49]

Figure 6.B

Victims Under the Age of 18 of Substance Involved Sex Offenders



Victims of Sexual Violence

Between 11 and 31 percent of victims of sex offenses admit being under the influence of alcohol during the offense.[50] CASA's analysis finds that sex offenders claim that one in five of their victims was drunk or on drugs at the time of the assault; seven percent were using alcohol only; six percent were drinking and using drugs; six percent were using drugs alone (see Table 6.8).[51] Victim substance use may be related to use by the perpetrator of alcohol or other drugs to render the victim vulnerable.[52]

Women who have alcohol and drug problems are more likely to be sexually abused and experience more sexual assaults.[53] In one study, three-fourths (74 percent) of women in alcohol treatment reported experiencing some form of sexual abuse during their lifetime, compared to half of nonalcoholic women.[54] In another, women admitting drug use were almost twice as likely as women who did not use drugs to experience an assault during the next two years.[55]

Alcoholic women in treatment are more than five times likelier to experience forced penetration as a child compared to a household sample of women (47 percent vs. nine percent).[56] Twenty-five percent of female crack users in jail and 21 percent of women in jail who regularly use other drugs were sexually abused as children.[57] Among drug-abusing African-American women, 48 percent of crack users and 37 percent of heroin users had been sexually abused, commonly during childhood.[58]

Such childhood and adult experiences of sexual abuse can trigger adult substance problems.[59] Female victims of childhood sexual abuse are more likely than nonabused women to become alcohol abusers and alcoholics at some time in their lives; 27 to 37 percent, compared to four to 20 percent. Fourteen to 31 percent of abused women develop drug-related problems compared to three to 12 percent of nonabused women.[60]

Table 6.7

Age of the Victims of Sex Offenders, by Percentage [a]

Victim's age: [b]	Nonuser	Alcohol-only user	Drug/alcohol user	All sex offenders
12 or younger	44	34	24	31
13 to 17	31	30	25	28
18 to 24	12	12	20	17
25 or older	12	25	31	24

[a] Single victim sex offenders. Does not add to 100 percent due to rounding.

[b] Significant at <.001.

Women who suffer sexual and physical abuse, both in childhood and adulthood, are not only at greater risk for substance abuse,[61] they are also at greater risk for STDs,[62] unintended pregnancy[63] and prostitution.[64] Sexually abused men are likelier than nonabused men to use drugs and engage in risky sexual behavior.[65]

Alcohol use by a sex offender may be associated with more violent handling of the victim. A study of 50 sex offenders found that the high-violence subgroup was significantly more likely than the no- or low-violence group to have serious alcohol abuse and dependency problems.[66] A review of police records found that forcible rapes in which the offender was drinking while the victim was sober were more likely to result in the brutal beating of the victim.[67]

Sex offenders who report that their victims were using alcohol or drugs or both were more likely to report that their victim received additional injuries during the sex offense (between 24 and 33 percent compared to 15 percent) (see Figure 6.C).[68]

While these data show a relationship between substance use and level of injuries in addition to rape or sexual assault (bruises and black eyes to broken bones and gunshot wounds), the relationship does not appear to be causal: neither offender nor victim substance use in and of itself increased the level of additional victim injury.* [69]

Table 6.8

Percentage of Sex Offenders Who Report that their Victim Was Using Substances at the Time of the Offense[a]

Victim was under the influence of: [b]	Nonuser	Alcohol-only user	Drug/ alcohol user	All sex offenders
Nothing	79	68	65	71
Alcohol only	4	12	8	7
Drugs only	4	5	7	6
Both alcohol and drugs	3	3	8	6
Could not tell which substance was being used [c]	10	12	12	10

[a] Single victim sex offenders. Does not add to 100 percent due to rounding.

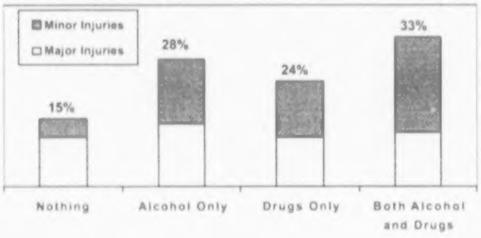
[b] Significant at <.001.

[c] Includes missing values.

Figure 6.C

Victims' Substance Use Linked to Additional Injuries

Victim was under the influence of:



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* After controlling for the age, race and childhood victimization of the offender and age and race of the victim.

CHAPTER VI

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[14] CASA analysis of data from the 1997 Arrestee Drug Abuse Monitoring Program.

[15] CASA analysis of data from the 1997 Arrestee Drug Abuse Monitoring Program. These rates are lower than rates of drug involvement for male arrestees arrested for other violent crimes. Comparatively, 58 percent of other violent male arrestees tested positive for drugs. Twenty-two percent tested positive for marijuana only and 36 percent tested positive for drugs other than or in addition to marijuana. Nineteen percent of other violent arrestees tested positive for more than one drug (including marijuana). Excluding marijuana, eight percent of other violent arrestees tested positive for more than one drug.

[16] CASA analysis of data from the Bureau of Justice Statistics 1991 Survey of State Prison Inmates.

[17] CASA analysis of data from the Bureau of Justice Statistics 1991 Survey of State Prison Inmates.

[18] CASA analysis of data from the Bureau of Justice Statistics 1991 Survey of State Prison Inmates.

[19] Comparatively, among other violent offenders in state prison, 29 percent were under the influence of drugs during their crime--13 percent of drugs alone and 21 percent of both drugs and alcohol. Excluding those who were only under the influence of marijuana, 21 percent of sex offenders were under the influence of a drug during their crime. In the month prior to their offense, 46 percent of other violent offenders were using drugs, including 29 percent who were using drugs other than marijuana. Based on CASA analysis of data from the Bureau of Justice Statistics 1991 Survey of State Prison Inmates.

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VII. Sex Offenders, Recidivism and Treatment

Substance-abusing sex offenders are more likely to be criminal recidivists than nonabusing sex offenders, yet are less likely to receive treatment than other violent offenders. Investment in treatment could reduce crime and criminal justice costs.

Characteristics of Substance-Abusing Sex Offenders

CASA's analysis reveals that of the 115,900 sex offenders in state prison in 1998,[1] an estimated 66 percent were under the influence of drugs or alcohol at the time of their sex crime; committed their crime during an attempt to get money to buy drugs; had histories of regular illegal drug use; had received treatment for alcoholism; or shared some combination of these characteristics.[*] [2] Thirty percent were daily or almost daily drinkers during the year prior to their offense;[3] 22 percent used drugs daily or almost daily during the month prior to their offense; and 29 percent regularly (at least weekly) used drugs in the month prior to their offense.[4]

To better understand the profile of the substance-involved sex offender and the types of treatment that can reduce their recidivism, CASA conducted an extensive analysis of the personal characteristics of incarcerated sex offenders with substance abuse problems. CASA categorized sex offenders as nonusers, alcohol-only users and drug/alcohol users (see Table 7.1).[†]

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[*] Unless otherwise noted, the tables in this chapter are from the CASA analysis of data from the Bureau of Justice Statistics 1991 Survey of State Inmates.

[†] Information was not sufficient to create a category of those who only used drugs and not alcohol, since it was impossible to define the level of alcohol use and since most drug users also drink alcohol, the third category is referred to as drug/alcohol users.

Table 7.1

Substance-Using Sex Offenders in State Prison[*]

Type	%	Estimated number	Definition
Nonusing Sex Offenders	30	34,770	Never used drugs other than marijuana; never regularly used marijuana; were not drunk or on drugs when they committed their current offense; and have never been in treatment for an alcohol problem.
Alcohol Only-Using Sex Offenders	17	19,700	Under the influence of alcohol alone at the time of their current offense; or have ever been in treatment for alcohol problems. Never used drugs other than marijuana and have used marijuana regularly.
Drug/Alcohol-Using Sex Offenders	53	61,430	Ever used drugs other than marijuana; or ever regularly used marijuana; or were under the influence of drugs or a combination of drugs and alcohol at the time of their offense.
Total	100	115,900	

Table 7.2

Demographic Characteristics of Sex Offenders in State Prison Compared to Other Violent Offenders

	Nonuser	Alcohol-only user	Drug/alcohol user	All sex offenders	Other violent offenders
Age (average)	*42*	*39*	*33*	*37*	*32*
Race[a]	%	%	%	%	
White	60	62	51	56	32
Black	27	25	36	31	51
Hispanic	9	10	10	10	15
Other	3	4	3	3	3
Marital Status[b]					
Single, Never Married	31	29	48	40	57
Divorced, Separated, Widowed	40	46	36	39	52
Married	28	24	16	21	18

[a] Significant at <.05.
[b] Significant at <.001.

Demographic Characteristics

Although all sex offenders as a group are older (mean age 37), the age of substance-involved sex offenders (mean age 33) parallels that of substance-involved inmates incarcerated for other violent offenses (see Table 7.2).[5] While sex offenders generally are more likely to be white than other violent offenders, drug/alcohol-using sex offenders are more likely to be African-American than other sex offenders. Drug/alcohol-using sex offenders are more likely than nonusing sex offenders to have never been married. Alcohol-only users are the most likely to be divorced/separated.

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[*] While alcohol or drug abuse is linked to the crimes of two-thirds of incarcerated sex offenders, fully 70 percent have used illicit drugs or are alcohol abusers and may benefit from treatment.

Substance Abuse and Criminality in the Families of Sex Offenders

Many sex offenders grew up in families marked with drug and alcohol abuse and criminality. One in three sex offenders has a parent who abused alcohol. Sex offenders who themselves use and abuse substances are even more likely to report that their mother, father or both abused alcohol and drugs. Alcohol-only users are almost twice as likely as nonusers to have parents who abused alcohol and not drugs. Drug/alcohol users are more than three times as likely as nonusers to have parents who abused both drugs and alcohol (see Table 7.3).[6]

Table 7.3

Percentage of Sex Offenders in State Prison Who Report That Their Parents Abused Substances

	Nonuser	Alcohol-only user	Drug/ alcohol user	All sex offenders
Parents Abused:[a]				
Any substance	18	31	40	31
Drugs, only	1	[b]	[b]	[b]
Alcohol, only	16	31	33	27
Both drugs and alcohol	2	1	7	4

[a] Significant at <.001.
[b] Less than one percent

One-third of sex offenders have a close family member who served time in prison or jail (usually a brother or step-brother). Forty-two percent of drug/alcohol users report a close family member who was incarcerated, compared to 31 percent of alcohol-only users and 23 percent of nonusers.[7]

Sexual and/or Physical Abuse History

Drug/alcohol-using sex offenders are more likely to have been physically and sexually abused (16 percent) than nonusers (nine percent) or alcohol only users (nine percent) (see Table 7.4).[8] An inmate with a history of sexual abuse is almost six times likelier to be a sex offender after controlling for age, race and family history. Twenty-eight percent of sex offenders report that they were abused before the age of 18; a quarter (24 percent) has been abused several times. Men abused as children are more likely to commit violent and sex offenses.[9]

Mental Health Problems

Twenty-nine percent of drug/alcohol-using sex offenders, 26 percent of alcohol-only users and 21 percent of nonusers have, prior to their incarceration, been admitted (or sent by the courts) to a mental hospital or inpatient mental health treatment program.[10] Overall, almost one in five sex offenders (18 percent) has such a history of mental health treatment.

Educational and Vocational Experiences

About one-third of all sex offenders has less than a high school education compared to 39 percent of alcohol-only sex offenders, 36 percent of nonusers and 33 percent of drug/alcohol users. There is little difference in the pre-prison employment of sex offenders based on their substance involvement. Most (81 percent) sex offenders were employed before going to prison, though about half (48 percent) of sex offenders were making less than $10,000 a year.[11]

Table 7.4

Percentage of Sex Offenders in State Prison Who Report a History of Sexual/Physical Abuse

	Nonuser	Alcohol-only user	Drug/ alcohol user	All sex offenders
Sexually and/or physically abused: [a]	26	27	31	29
Sexually abused, only	10	9	6	7
Physically abused, only	7	9	9	9
Both sexually and physically abused	9	9	16	13

[a] Not significant.

Recidivism

CASA's analysis shows that alcohol-only and drug/alcohol-using sex offenders have greater past histories of criminal involvement than nonusing sex offenders (see Table 7.5).[12] They are less likely, however, to have repeat convictions for sex offenses.

Table 7.5

Percentage of Sex Offenders in State Prison Who Are Repeat Offenders by Category of Offender

	Nonuser	Alcohol-only user	Drug/ alcohol user	All sex offenders
Convicted of one or more prior offense[a]	44	58	74	62
Of those with prior convictions, percent who served time for a prior sex offense	21	14	10	13

[a] Includes those sentenced to incarceration and probation

A study of sex offender treatment and recidivism in Minnesota found that among 1,232 sex offenders sentenced to probation and followed up for seven and eight years, 56 percent of those who committed a new offense were alcohol abusers or addicts while 35 percent of those offenders who remained crime-free were alcohol abusers or addicts. Thirty-eight percent of offenders who were under the influence of alcohol at the time of their original offense committed (compared to 18 percent who were sober) a new offense and 10 percent committed a new sex offense (compared to six percent who were sober).[13]

Treatment

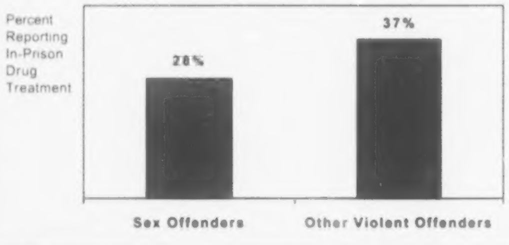
Sex offender treatment in prison typically attempts to help offenders understand, take responsibility for and learn to control behavior to prevent relapse and recidivism. Treatment components for incarcerated sex offenders can include such techniques as polygraph testing, plethysmograph testing (measuring penile response), hormone therapy, and confrontation and adverse conditioning. Sex offender treatment primarily relies on group counseling/therapy.[14]

CASA's study *Behind Bars: Substance Abuse and America's Prison Population*, published in 1998, found that the availability and use of prison-based substance abuse treatment falls far short of the need for such treatment.[15] The situation is especially troubling with respect to substance-involved sex offenders.

When comparing offenders who are substance-involved, sex offenders are less likely to receive in-prison drug treatment than are other violent offenders (Figure 7.A).[16] Few receive long-term or intensive drug treatment.[17] Six percent of substance-involved sex offenders participated in residential drug treatment (compared to seven percent of other substance-involved violent offenders) and six percent participated in individual counseling (vs. eight percent). Twenty percent of substance-involved sex offenders participated in group counseling (vs. 28 percent), 13 percent in peer counseling (vs. 19 percent) and seven percent in other drug education or awareness programs (vs. nine percent).* [18]

Figure 7.A

Substance-Involved Sex Offenders Are Less Likely to Receive Drug Treatment in Prison Than Other Substance-Involved Violent Offenders



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* An offender may have participated in more than one type of drug treatment; thus these categories overlap and do not add to 28 percent.

The data available include little about the alcohol treatment experience of incarcerated sex offenders. CASA was only able to determine that 21 percent of substance-involved sex offenders report involvement in alcohol-related self-help groups like Alcoholics Anonymous or Al-Anon, a higher participation rate than the 15 percent among other substance-involved violent offenders.[19]

On January 1, 1997, only three percent of state inmates were in sex offender treatment programs;[20] yet sex offenders represent approximately 11 percent of all state inmates.[21] Moreover, sex offender treatment rarely includes attention to the individual alcohol and drug problems of participants.[22]

Because the average sex offender will return to his community after serving about five years in prison,[23] problems of substance abuse and other issues that may be a factor in criminal behavior should be addressed prior to release. CASA's finding of distinct substance-use profiles among sex offenders suggests that treatment programs be tailored to the different needs of sex offenders. Inmates with drug and alcohol problems need programs that recognize and address their histories of sexual and physical violence. Drug-involved offenders who are more likely to be under the age of 35 and involved in a variety of criminal activities require treatment quite different than that appropriate for alcohol- and drug-involved white offenders who are older and whose deviance seems more narrowly focused on sexual aggression. Substance-involved sex offenders with a longer history of addiction treatment and of treatment failure may require additional interventions. These considerations are also relevant to the sentencing of sex offenders.

Why Invest in Treatment?

The annual cost of incarcerating substance-involved sex offenders was $1.6 billion in 1998 dollars.[24] With an average sentence length of five years,[25] the total cost of incarcerating these substance-involved sex offenders will be $8 billion. Each new sex offender costs an average of about $100,000 to incarcerate. In addition, the victimization costs are considerable. One widely cited study estimates the total dollar cost endured by a rape victim (including "pain and suffering" and health costs) at $98,199.[26] Assuming each incarcerated sex offender in 1998 had one victim, this would place the total victimization costs resulting from their crimes at more than $7.5 billion.

Prison-based drug treatment with aftercare is effective at reducing recidivism and relapse, and lowering these hefty costs.[27] Several economic analyses have underscored the substantial taxpayer benefits that result from substance abuse treatment, especially for inmates.[28]

If substance abuse treatment were provided to sex offenders in prison, the potential improvement in pubic safety and reduction in crime and its associated costs could be substantial. National inmate data indicate that 32 percent of sex offender inmates are rearrested for a new crime within one year of release from state prison.[29] Sex offenders without substance involvement are estimated to have recidivism rates that are 40 percent lower than those with substance abuse problems.[30] Thus if substance abuse and sex offender treatment were provided to all substance-involved sex offenders, recidivism rates could fall substantially and the cost savings to society from new crimes would be dramatic.

CASA has estimated the potential economic benefits from getting substance-involved sex offenders sober, working and crime-free, based on estimates for state prison inmates in general.[31] For each substance-involved sex offender who successfully completes treatment and returns to the community as a sober parolee with a job, economic benefits that will accrue in the first year after release amount to an estimated $68,800:[32]

- $5,000 in reduced crime savings, conservatively assuming that ex-inmates who are active drug users would have committed 100 crimes per year with $50 in property and victimization costs per crime;[33]

- $7,300 in reduced arrest and prosecution costs (assuming that they would have been arrested twice per year);[34]
- $19,600 in reduced incarceration costs (assuming that one of those rearrests would have resulted in a one-year prison sentence);[35]
- $4,800 in health care and substance abuse treatment cost savings, the difference in annual health care costs between substance users and nonusers;[36]
- and $32,100 in economic benefits ($21,400--the average income for an employed high school graduate--multiplied by the standard economic multiplier of 1.5 for estimating the local economic effects of a wage).[37]

Unfortunately adequate data are not available on the costs of combining comprehensive substance abuse treatment, sex offender treatment, training and aftercare for this population or even what a combined program would look like in practice. CASA has estimated that providing one year of residential substance abuse treatment with training and aftercare would cost $6,500 for prison inmates.[38] Although one available estimate of the annual cost of sex offender treatment ranges from $2,777 to $6,203 depending on the prison facility,[39] it is likely that a combined program would cost less than simply adding substance abuse and sex offender treatment costs together. The cost of providing to all substance-involved sex offenders in state prison combined substance abuse treatment, sex offender treatment, training and aftercare could therefore range from $497 million (76,500 inmates at $6,500 per individual) to $972 million (76,500 inmates at $12,700 per individual). The actual cost is likely to be somewhere within this range.

But, given $68,800 in economic benefits per year, if an additional 20 percent of sex offenders remained drug- and crime-free in the first year after release, there would be an economic benefit of $88 million even at the higher treatment cost.[40] If only an additional 10 percent of such offenders remained drug- and crime-free, then it even yields benefits ($29 million) at the lower treatment cost.[41] Given the success rates of existing comprehensive substance abuse treatment and aftercare for substance-involved inmates generally,[42] these rates could readily be achieved for sex offenders as new combined programs are developed and refined. For every inmate who stays crime-free and employed after the break-even point, $68,800 in economic benefits would accrue annually. This would translate into between $497 million (at 10 percent remaining crime-free) and $1.05 billion (20 percent remaining crime-free) in benefits per year.

Because of the lack of available data, these estimates require several assumptions that should be tested further: the ability of sex offenders to obtain jobs, the efficacy and costs of combined substance abuse and sex offender treatment, jurisdictional differences in recidivism and crime rates, and differences in costs of incarceration and parole for sex offenders compared to other inmates.[43]

CHAPTER VII

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[3] Due to data limitations, additional information about the alcohol use patterns of these inmates is not available.

[4] Caution must be taken in drawing conclusions from inmate and other offender data about sexual violence generally and the level and impact of substance abuse in particular. Inmates incarcerated for sex offenses represent only those who have been arrested and punished. Factors such as age, race, class, prior criminal record and relationship to the victim will affect the likelihood of reporting, arrest, conviction and incarceration. Such factors may be further correlated with alcohol use its impact on the sexual violence. Incarcerated sex offenders may not be representative of all arrested sex offenders, or of sex offenders in general. For a discussion of other data limitations, see Appendix A. CASA analysis of data from the Bureau of Justice Statistics 1991 Survey of State Prison Inmates.

[5] CASA analysis of data from the Bureau of Justice Statistics 1991 Survey of State Prison Inmates.

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[16] The survey specifies in-prison drug treatment. In-prison treatment for alcohol is not included as a separate question. CASA analysis of data from the Bureau of Justice Statistics 1991 Survey of State Prison Inmates.

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[41] 76,500 inmates x $68,800 x 0.10 = $526,320,000 - $497,000,000 = $29,320,000.

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[43] This analysis does not take into account the potential difficulty sex offenders might have obtaining jobs, given the stigma attached to being a convicted sex offender and the increasing number of laws that require notifying their communities when sex offenders are released from prison. On the other hand, sex offenders have somewhat greater educational and employment attainment than inmates incarcerated for other violent crimes, which might help them find and keep jobs after release. Second, although several literature reviews have found that sex offender treatment reduces recidivism, until more combined substance abuse and sex offender treatment programs are implemented and evaluated, it is not know whether such programs will have greater or lesser impact than existing substance abuse treatment programs for inmates or what programs or combinations of programs work best for which inmates. Third, the only data available on the relative recidivism risk for substance-involved sex offenders is from Minnesota and the impact may vary across jurisdiction. Fourth, the annual cost estimates for sex offender treatment are derived from Minnesota data and average national costs may be lower or higher. Fifth, the estimated number of new crimes committed after release is based on studies of active street drug users, not substance-involved sex offenders. Finally, we have assumed that the cost of incarceration and parole supervision is the same for a sex offender as for other types of inmates. Lotke, E. (1996). Sex offenders: Does treatment work? *Corrections Compendium, 21*(5), 1-3.

VIII. Substance Abuse and Prostitution

Most prostitutes are drug and alcohol abusers and many drug and alcohol abusers, particularly women addicted to crack and heroin, trade sex to support their drug-using lifestyle. Heroin and crack cocaine are the drugs most closely connected to prostitution and alcohol use is common among prostitutes. Alcohol and drug use is associated with decreased condom use among prostitutes, placing them at even higher risk for STDs and HIV/AIDS. Clients of prostitutes frequently drink and use drugs.

> *...I turn tricks to get drugs. I was turning tricks anyway. I started turning tricks for survival. To pay bills and stuff. Now I turn tricks only to buy cocaine.*
>
> --Drug-using prostitute[1]

Studies looking at drug use among prostitutes (rather than prostitution among drug users) report that from 40 to 86 percent of prostitutes are drug users.[2] Most women begin using drugs prior to or at the time that they become prostitutes.[3] Many use drugs in order to function as prostitutes--to enhance sociability with clients, adjust mood, provide energy and assist in sleeping and coping.[4] Prostitutes often drink while working.[5] Little information is available on male prostitutes, but their drug- and alcohol-involvement may be as high as that of female prostitutes.[6]

Trading Sex for Drugs

Estimates of the percent of drug users or addicts who have engaged in prostitution range from 18 to 72 percent.[7] Forty-three percent of women and 10 percent of men in treatment for alcohol problems admit trading sex for money or drugs.[8] Heavy drinkers are three times more likely than other drinkers to admit getting paid for sex.[9]

Drug addicted women who exchange sex for money or drugs are more likely to work on the street than other prostitutes, less likely to use condoms, less able to negotiate the terms of the encounter and less likely to have regular clients. They are more likely to spend all the money they earn on drugs, often do not engage in prostitution when drug-free and have more negative feelings about prostitution.[10]

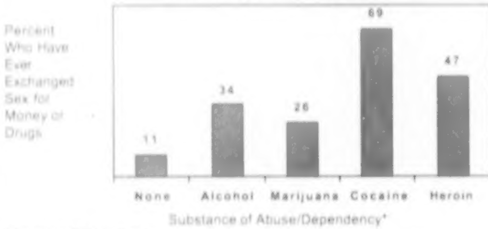
Drugs Decrease Condom Use Among Prostitutes

> ...*I used to use*...[condoms]. *But not always. 'Cause if a trick say "I don't use them things," I ain't gonna turn down no $20, $30... ...I'm telling you, once you get this rock in your system, a person might almost do anything.*
>
> --Crack-using prostitute[11]
>
> ...*Lots of guys, even though AIDS is going around, they don't want to use no rubber. They refuse to use a rubber. And then it be hard. I'm not gonna lie. It's real hard. It's hard as hell to walk away from a guy that got 10 dollars or five dollars in his pocket and want it real bad and the only thing stopping you is a rubber. You want that money so bad. And sometimes I'll go for it.*
>
> --Drug-using prostitute[12]

As shown in Figures 8.A and B, exchanging sex for money or drugs is common among alcoholics and drug addicts, particularly cocaine and crack users.[13] The advent of crack cocaine has changed the relationship between drugs and prostitution and in the process, lowered the price for sex with prostitutes in some areas.[14] The shortness of the crack high creates a desperation during which the addict is often willing to do anything for the price of just one more high. The crack house setting fosters sex-for-crack or sex-for-money exchanges.[15]

Figure 8.A

Alcoholics and Drug Addicts Are More Likely to Have Ever Exchanged Sex for Money or Drugs

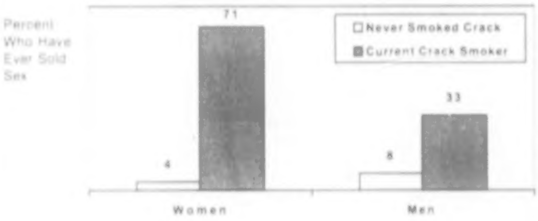


* Based on DSM III-R criteria.

Source: Adapted by CESAR from Michigan Department of Community Health, Bureau of Substance Abuse Services/Bureau of Infectious Disease Control, "The Michigan Substance Abuse, Tuberculosis and Sexually Transmitted Disease Survey (MSATS)," May 1997. *CSAT by fax*, December 23, 1998, Vol 3, Issue 23.

Figure 8.B

Crack Use Is Associated With Selling Sex*



* Among those who have never injected drugs. Age 18 to 29.

Source: Edlin, B.R. et al. (1992). High-risk sex behavior among street-recruited crack cocaine smokers in three American cities: An interim report. *Journal of Psychoactive Drugs*, 42(4): 353-371.

Condom Use Among Prostitutes

Extreme risk is involved in sex-for-drugs or sex-for-money exchanges. Condom use is inconsistent at best, particularly in sex-for-crack exchanges.[16] One study of noninjecting crack-using women who recently traded sex-for-money found that while 63 percent reported using a condom with a paying partner in the last 30 days, only 38 percent reported always using a condom with a paying partner.[17] Many desperate crack-using women agree to not use condoms if the client insists or if it means a higher payment.[18]

Failure to use condoms takes its toll, often spreading sexually transmitted diseases and HIV.[19] One study of prostitutes found that eight percent were HIV-positive (compared to 0.2 percent of women in a community-based sample of noninjecting heterosexuals[20]) and 17 percent had syphilis[21] (compared to 0.03 percent of

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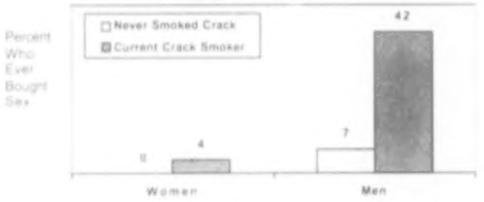
adults in the national population[22]). Syphilis rates are particularly high among prostitutes who exclusively used crack cocaine.[23]

Alcohol and Drug Use by Those Who Frequent Prostitutes

Men who buy sex may use substances to approach a prostitute and reduce feelings of guilt, shame or anxiety or to break the ice.[25] One study shows that most male clients (78 percent) drink at least sometimes when seeing a prostitute or other sex worker and 12 percent usually or always use illicit drugs.[26] Among a sample of street-recruited youth (age 18 to 30), crack use was associated with buying sex for both women and men (see Figure 8.C).

Figure 8.C

Crack Use Is Associated With Purchasing Sex*



* Among those who have never injected drugs. Age 18 to 29.
Source: Edlin, B.R. et al. (1992). High-risk sex behavior among young street-recruited crack cocaine smokers in three American cities: An interim report. *Journal of Psychoactive Drugs* 42(4): 353-371

Drugs and Sexual Violence Among Prostitutes

Prostitutes have been found almost three times more likely to have experienced childhood sexual violence (nonconsensual penetration) than a comparison group of women sampled from an STD clinic (25 percent vs. nine percent).[27] Prostitutes in this sample were also almost four times likelier to use drugs (86 percent vs. 23 percent). Individuals abused and neglected as children are 28 times more likely to be arrested for prostitution than those who were not abused or neglected.[28]

For drug-using women who exchange sex-for-drugs or for sex-for-money, sexual violence from customers, drug dealers, pimps and partners goes with the territory. About a third of female crack users who exchanged sex for money or drugs in the 30 days before being interviewed had been raped in the past year, compared to seven percent of crack users who had not engaged in prostitution.[29]

William D. Avery.... [went to prison] for running a drug house that catered to cocaine-addicted prostitutes, but the fact that one of them wound up strangled didn't go unnoticed by the judge or the prosecutor.

Like the other women who bought crack from Avery and...traded sexual favors for drugs in his $10 beds, Maryetta Griffin was living a high-risk life liable to end violently at any time.

'These people were totally consumed by crack cocaine,' [the Assistant District Attorney] said in court.

'These people who have such low self-esteem that they're selling their bodies (for drugs)' [the Circuit Judge] told Avery. 'Ms. Griffin was the tragic victim of that lifestyle.'

--*Milwaukee Journal Sentinel*
August 26, 1998[24]

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CHAPTER VIII

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IX. Improving Policy and Practice--Experience from the Field

Despite the dangerous liaisons between substance use, abuse and sex, drug and alcohol abuse prevention and treatment programs rarely address sex, and sex education programs rarely address alcohol and drugs use in any comprehensive way. Substance abuse treatment programs rarely help participants come to grips with their sexual problems, risks or the danger of decreased sexual function. Programs for sexually violent individuals seldom grapple with their drug and alcohol abuse. Programs to help victims of sexual violence tend to ignore alcohol or drug use or abuse by the victim.

Nonetheless, many program interventions aimed at preventing and treating substance abuse, reducing teen pregnancy, reducing risky sexual practices or sexual violence and improving sexual function, include some information on both sex and drugs and some seek to address these issues more comprehensively.

Over the course of this study, CASA examined programs for teens, college students, women, homosexuals and bisexuals, racial/ethnic minorities, offenders, victims of violence and drug addicts and alcoholics. CASA reviewed an informal sample of some 60 programs and selected 12 to illustrate different ways of approaching the issues of substance use and sexual activity or violence.* CASA does not claim to have captured all innovations, but this sample identifies some innovative efforts and barriers to more effective practice.

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* Unless otherwise noted, information in this chapter is based on CASA's discussions with prevention and treatment program directors, staff and researchers, site visits and from materials provided by the programs reviewed. Details of the programs reviewed and contact information are included in Appendix H. A general list of resources for the reader is presented in Appendix I.

Prevention Programs

Prevention Programs for Adolescents

The best intervention is prevention. Prevention begins at home; ideally, children and teens receive information and learn values and skills in the home that will enable them to refuse drugs, to abstain from sex or to make smart and safe sexual decisions. Too often this is not the case. CASA's *Back to School 1999: National Survey of American Attitudes on Substance Abuse V: Teens and Their Parents* found that while 84 percent of parents report talking to their children about drugs, only 64 percent of teens say that their parents have discussed the dangers of drugs with them.[1] Sixty-three percent of students report ever having talked to a parent or other adult in their family about AIDS or HIV.[2]

Much of the burden of prevention falls by default to the nation's schools. While there is considerable support for sexuality and HIV/AIDS education in schools,[3] the type of education varies widely depending on the values of local board members and the influence of various religious or political groups. For example, many schools teach an "abstinence only" message, while some schools distribute condoms to high school students.[4]

> *Sex education/health needs to be a part of the environment all the time, not just a pamphlet or an after-school special.*
>
> --Health Educator

Schools can help, but they cannot substitute for parents. It is easier in a religious school to focus on a specific message because of shared values than in an urban public school where parents come from more divergent social, religious and cultural backgrounds.

Most schools offer some drug education and prevention programming, although this fluctuates over time as national awareness and attention to drug problems rise and fall.[5] Despite the widespread prevalence of some type of drug education offered in the schools, this topic ranks low among teacher priorities: according to CASA's *Back to School 1997--National Survey of American Attitudes on Substance Abuse III: Teens and Their Parents, Teachers and Principals*, only 18 percent of teachers and 15 percent of principals believe that drugs are the number one problem facing teens.[6] In contrast, in 1997, 35 percent of teens felt that drugs were their number one problem.[7]

Planned Parenthood's
Chances or Choices: A Curriculum for Teen Decision Making about Sexuality, Alcohol & Drugs

For young people, sexual activity and drug/alcohol use are two modes of experimenting with adult behavior that can have tragic consequences. These two kinds of experimentation often occur together. Teens frequently say they use alcohol to reduce the anxiety of peer pressure in general, and sexual pressure specifically. This practice casts sexual decision-making and sexual experience into a mode where:

A. Sex is allied to an illegal, unhealthy behavior.
B. Sex is experienced as part of aggression, violence, illness and interruption of the body's ability to respond, which often accompany use of drugs/alcohol.
C. Social skills, sexual feelings, and experiences are learned in an altered state of awareness and control, thus encouraging dependence on alcohol/drugs for social/sexual functioning.
D. Impairment of sexual decision-making can undermine an adolescent's self-esteem and the building of a trusting communication between friends and dates.

*Including problem-solving about drugs/alcohol together with sexuality in a curriculum acknowledges hard decisions teens face, positive and negative ways of experiencing and expressing sexuality. It helps young people understand what it means to **own** their behavior and feelings, to **own** the consequence.*[8]

National, state and local organizations provide community-based programs to prevent teen pregnancy, risky sex or drug or alcohol abuse. In exploring these education and prevention programs, CASA found that the nature of the link between substance use/abuse and sex ranges largely from underdeveloped to tenuous, and that even national curriculum-based programs vary dramatically among locations. There are almost no outcome data with which to assess the effectiveness of these programs.

Substance use and abuse prevention and education is mentioned as a primary focus in only a few available curricula teaching about sexuality-related topics.[10] Most curricula do not attempt to build a comprehensive understanding of the impact of alcohol or drugs on sexual activity or to build skills to manage substance-involved sexual situations that teens will inevitably encounter. Many program directors, researchers and other professionals working in the areas of sex education or substance abuse education and prevention do not themselves specifically focus on the link between substance abuse and sex. Further, staff of drug prevention/education programs often are wary of incorporating issues of sex.

> *It is important for adolescents to know not only that drugs can impact decision making, but also that drugs can affect pubescent development.*
>
> --Director of a sexual abstinence program

The programs CASA examined--from abstinence-only to comprehensive sex education-- attempt to focus on the link between substance use and sex: *F.L.A.S.H: Family Life and Sexual Health* (Department of Public Health, Seattle, WA), *SMART Moves* (Boys & Girls Clubs of America), *Best Friends* (Washington, DC), *SNEAKERS* (Florence Crittenton Services, Washington, DC), *The Male Responsibility Project* (Planned Parenthood, Memphis, TN), *Chances or Choices* (Planned Parenthood, Seattle, WA), *Girls Inc.* (Memphis, TN) and *Teen Choice* (New York, NY).

A key to comprehensive programming appears to be the incorporation of both education about the association between substance use and sex (i.e., the impact of substance use on sexual function, sexual pressure, disinhibition, risk taking and sexual violence), and practical skill-building to manage this association (e.g., role-playing, negotiation skills, strategies to resist pressure, ways to avoid high-risk situation). Programs like *SMARTMoves* recognize the inexorable links among drugs, alcohol, sex, teen pregnancy, STDs and HIV/AIDS. The development of life skills, setting goals and identifying personal and family values are

Best Friends on Love and Dating

Adolescents have so many questions about love. Unfortunately, it is a topic that is often omitted in sex education courses. Some instructors believe they cannot "teach" love because it is too personal and too difficult to define. Many adults believe that teenagers cannot experience love because they are too young.

We believe that the questions adolescents have about love and dating can be answered most appropriately by parents, teachers and other models who bring personal experience to the conversation and can provide appropriate guidelines. Open discussions about the responsibilities involved in a mature relationship can add a new dimension to the topic of love--a dimension that may be missing when love is discussed among peers...

Best Friends defines a mature love relationship as one in which:

- *You are not asked or expected to compromise things that are important to you, such as family, friends, school work, and personal goals.*
- *You feel good about yourself and good about life in general.*
- *You treat each other with kindness and respect.*
- *You can express yourself honestly.*

Remember: If your boyfriend says that the only way to prove your love is to have sex, it's a line![9]

reoccurring themes in integrated preventive programming.

Creating programs that are age-appropriate is an important element. For example, *FLASH* incorporates six volumes that present a graduated approach to learning about both sex and substance use. While programs for younger children begin to touch on these issues and lay some foundation for later lessons, older teenagers are given more concrete and detailed information around the connection between substance use and sex. Providing complete, frank and up-to-date information, in age-appropriate ways sensitive to cultural and language differences, can help teach young people how to avoid the association between substance use and sex.

These programs also demonstrate the importance of using the power of peer groups to influence young people on both these issues. Programs that emphasize friendship and peer support among girls, like the abstinence-only program *Best Friends*, make the program messages more salient for teens and help teens find support in resisting both substance use and sexual activity. *Best Friends* reinforces the importance of girls watching out for and protecting each other, incorporates a no use message for drugs and emphasizes the negative consequences of sexual activity and drug use.

Designing prevention programs around substance use and sex is important for high-risk populations as well. For example, the *Male Responsibility Project*, an interactive skill-building program targeted towards high-risk incarcerated juvenile males, provides factual information about HIV/AIDS and STDs that includes lessons on sexual responsibility and the use of condoms. Most of the boys in this program are in detention for drug crimes or drug involvement. The program provides strategies, specifically targeted to this population, for risk and prevention, problem-solving and communication, date rape prevention and identification of support systems.

While substance use is generally not a major focus of sexual violence prevention programs, two high school programs--*Sexual Violence in Teenage Lives: A Prevention Curriculum* (Planned Parenthood of Northern New England) and *Sexual Assault Support Service Workshops* (SASS, Portsmouth, NH)--attempt to teach students about the connection between substance use and sexual violence, how to be alert to the potential for sexual violence, avoid violent situations and relationships, communicate nonconsent and find help if subjected to sexual violence.

Prevention Programs for College Students

For many, college represents a time of great experimentation, including experimentation with both substance use and sexual activity. Many colleges and universities provide programs for students on safer sex, make contraception choices available and offer alcohol and drug abuse education and prevention. Some religiously affiliated colleges stress personal values and moral standards focused on abstinence and no drug or alcohol use. Many campuses provide "passive education" pamphlets for students to pick up anonymously, a few of which discuss the association between

Go Ask Alice!
www.goaskalice.columbia.edu

Go Ask Alice! is an internet site sponsored by Columbia University's health education program that answers users' questions about relationships; sexuality; sexual health; emotional health; fitness; nutrition; alcohol; nicotine; other drugs; and general health. The website receives about a thousand questions weekly which are answered by a team of Columbia University health educators and health care providers. Questions are anonymous and answers are posted publicly and archived so that users can access previous information.

Go Ask Alice! provides responses to a wide variety of questions in a language that is accessible and with a sense of humor. Such a forum provides a place to ask questions that they are too embarrassed to ask in person and a way to obtain information privately and 24 hours a day.

substance use and sex. While the impact of such pamphlets on changing behavior is unknown, they can reach individuals who are not receiving other campus services or programs, and they may be a trigger that spurs students to consider their own behavior and to seek out additional information or help.

Some schools address the link between substance use and risky sexual activity on an individual basis when students use other campus services such as counseling centers and health clinics. However, students who use health services may not be assessed for substance problems[12] or for other sex-linked problems, including STDs.

Many university efforts lack the comprehensive focus that might better create awareness and behavior change around the connection between substance use and risky sexual activity. Although health education offices conduct many programs on sex education and some believe that issues of substance use are being addressed adequately in health services, others find that the connection between substance abuse and sex is not recognized.

One of the largest difficulties in providing comprehensive education and prevention programming on college campuses appears to be the age-old issue of whose job it is. Programming around sexual health and prevention of sexual risk often is the responsibility of the health services offices. The source of substance use/abuse education and prevention programming is usually less well defined and often falls to the offices of campus and residence life. Responsibility for making the connection between substance use and sex can be neglected when different campus organizations believe that it falls in someone else's domain.

The prevalence of issues of sexual violence, particularly date rape and the dangers of excessive drinking on campuses--and the growing number of lawsuits seeking to hold colleges responsible--may lead such institutions to provide more education to students about the connection between substance use and sexual violence. College programs like *Sex Under Pressure* (Rutgers University, NJ)--peer-led skits about dating violence and substance use--help teach how to draw the line between consent and nonconsent when alcohol is involved.

Driven in part by concern over alcohol-related sexual assaults, more than a dozen colleges have recently abolished fraternities and sororities or required them to become coed. Many other fraternities and sororities have decided to ban alcohol.[13]

Excerpt From a College Flyer:

Alcohol is the Number One Date Rape Drug

1-3 drinks
-inhibitions relaxed
-judgment is altered
-some people are able to overcome shyness
-easier to take risks
-more comfortable touching and being touched
-greater feelings of arousal
-expectations of alcohol's effects influence behavior regardless of BAC as long as it is at low doses
-actual physiological response may or may not influence behavior depending on experience

6 or more drinks
-loss of coordination
-reduced reaction time
-noticeable clumsiness
-body is less ready for sex
-decreased blood flow to sex organs
-more likely to experience unintended or unwanted sex
-decreased vaginal lubrication
-less intense orgasm
-orgasm takes longer to reach

--Barnard Women Calling the Shots: Be Smart. Be Safe. Be In Control [excerpt from flyer][11]

Prevention Programs for Gays

Because of the major impact that HIV has had on the gay population, organizations like *Gay Men's Health Crisis (GMHC)* of New York City provide preventive education around the association between substance use and sex. Through efforts to educate individuals about the impact of substance use on sexual activity, GMHC provides strategies for managing the connections in the gay community, including a booklet called "Drugs in Party-Land: Think Thru the Buzz" to educate about the impact of substance use on sexual activity and provide strategies to manage the sex-drug connections.

Drugs in Party Land

> *Bingeing can mean party 'til you drop. You don't know when to stop and you can lose your whole weekend to sex and drugs. It can interfere with protecting yourself and someone else when you're having sex...If combination drugs, alcohol and sex is causing your problems, you can make changes.*
>
> --Gay Men's Health Crisis,
> educational pamphlet[14]

Substance Abuse Treatment Programs

Participation in substance abuse treatment can have a significant impact on reducing sexually risky or violent behavior[15] through reductions in alcohol- or drug-related sexual risk taking and increased knowledge of safer sex practices. Substance abuse treatment programs can help clients change behavior by, for example, using peer educators, providing information in understandable format, allowing questions and answers, providing follow-up "booster" education sessions or teaching women techniques for negotiating condom use.

New Directions (Memphis, TN), a residential substance abuse treatment program targeting African-Americans in high risk areas such as housing projects, demonstrates how strongly associated are substance abuse and risky sexual behaviors and how crucial is the need to address the issues together. Residential substance abuse programs like *New Directions* find that a substantial portion of their clients have STDs, including HIV or AIDS (*New Directions* estimates that 30 to 40 percent of their clients have HIV or AIDS, compared to approximately 0.1 percent in the general population living with AIDS[16]). Many of these clients contracted HIV not through drug use, but through sexual activity while under the influence of drugs.

Ten years ago the *Betty Ford Center* switched to gender-specific treatment to address both issues of addiction and sexual abuse. Their finding that over half of women entering treatment have experienced trauma--usually physical and/or sexual abuse--drove this decision. This approach has resulted in better outcomes after treatment for women.[17] Other treatment programs offer gender-specific treatment as well.

Victims of Sexual Violence

Programs that seek to help victims of sexual violence appear to have more difficulty incorporating issues of substance use. Many individuals who work with the victims of violence believe that substance use may be a cofactor in violence and that more efforts should be made to address these problems. However, others believe that the issues should be treated separately, to avoid the possibility of holding the victim responsible for the abuse. Current program responses include addressing issues of substance abuse if the victim brings them up, conducting support groups for victims who have substance problems or referring victims to other professionals for treatment of abuse or addiction problems.

Some domestic violence programs like the *Milwaukee Women's Center* (MWC) (Milwaukee, WI) are breaking new ground in integrating issues of substance abuse with programs for sexual violence. MWC services include a 24-hour crisis line, domestic violence shelter for women and their children, clinical, case management and support services for victims of domestic violence, substance abuse treatment, mental health services, transitional services/aftercare, violence prevention/education programs and a program for abusive men. MWC encourages women to address these multiple problems of sexual violence and substance abuse whether their treatment is for substance abuse or sexual victimization, and seek support and services for their problems.

Sex Offenders

Few programs for perpetrators of sexual violence comprehensively tackle the twin issues of substance abuse and sexual violence. CASA examined two programs that take an integrated approach: New *York State Chemical Dependency Abuse/Domestic Violence Program*, and *Lino Lakes Program of the Minnesota Department of Corrections*.

The New York program is the first prison-based program to address both substance abuse and domestic violence.[18] The men in the program must confront the roots of both of these destructive behaviors, recognize how they are connected and seek to break this link.

At Lino Lakes in Minnesota, substance-abusing sex offenders receive early and ongoing substance abuse treatment in addition to sex offender treatment. Issues of substance abuse are incorporated into sex offender treatment, in the development and application of prevention strategies and in planning for return to the community.

There are several prerequisites to creating such integrated programming: availability of a supportive administration and correctional officers, an educated staff and a secure physical environment. Therapists working with men in the substance treatment phase must understand and address issues of sexual violence and criminal behavior and those working with men in the later stages of therapy must continue to address substance abuse.

CHAPTER IX

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X. Breaking the Dangerous Liaisons Between Substance Use and Sex

To help break the dangerous liaisons between drinking, drug use and sex, CASA proposes the following recommendations:

Parents Power Is Key to Reducing a Teen's Risk of Substance Abuse

Key to reducing a teen's risk of substance abuse is parent power. Parents and other guardians should invest their children with the values and standards of conduct to deal with the world of sex, alcohol and drugs that their children will face. Every teen will be required to choose whether to drink, use drugs and have sexual intercourse. Parents have more influence over how their children respond than anyone else. How parents exercise their power in talking to their children about drinking, using drugs and engaging in sexual activity will be critical in how their children respond to the lure of alcohol, drugs and sex. There are no silver bullets, but parent power can make the biggest difference in the lives of their children.

Schools, Health and Social Service Providers Should Create Comprehensive Prevention Programs That Address Both Substance Abuse and Sex

Schools, health and social service providers should offer age-appropriate and effective education about the association between substance use and sex (e.g., the impact of substance use on sexual pressure, risk-taking and sexual violence, transmission of STDs, sexual disinhibition and function) and practical skill-building to manage this association (e.g., role-playing, negotiation skills, strategies to resist pressure, ways to avoid high-risk situations).[1]

Substance Abuse Treatment Programs Should Confront Issues of Sexual Risk

Substance abuse treatment programs should perform a complete assessment of clients that includes exploration of sexual activity and sexual health (including STDs, HIV and sexual dysfunction), victimization experiences (both as a child and an adult) and violent tendencies. Programs should help clients identify the roots of both substance abuse and risky sexual behaviors and recognize how they are connected and professional staff should be trained to do this.

Programs to Help Individuals Subjected to Sexual Violence Should be Sensitive to the Possibility of Substance Abuse

Professionals servicing those who have been on the receiving end of sexual violence should be trained to deal with substance abuse and addiction of their clients. They can encourage victims of sexual violence to address problems of substance abuse and assure that they have access to health, mental health and other support and services they may need. Treatment should examine how substance use may be a reaction to violence and how such use may increase an individual's vulnerability to violence. Organizations that fund programs for education and prevention and substance abuse treatment for victims of sexual violence should require that providers address both issues of substance abuse and sex, and ensure that programs are of sufficient duration to effect change.

State and Federal Criminal Justice and Prison Systems Should Assess All Sex Offenders to Identify Treatment Needs Related to Alcohol and Drug Abuse and Addiction and Provide Treatment for Those Who Need It

Prisons should provide aftercare planning, recognizing that many offenders will be returning to families and communities often characterized by drug use and criminal activity. Prisons should also train administration and staff about the needs for combined treatment and the nature of the treatment programs, and maintain solid communication and collaboration among members of the clinical and correctional team.

Health Care Professionals Should Recognize the Connections Between Substance Abuse and Sexual Activity, Assess Their Patients for Such Problems and Arrange Appropriate Treatment

Family doctors, nurses, counselors and other health care professionals should be trained to provide or assure that their patients receive appropriate treatment. They can provide patients with educational materials about substance use, sexual function, risky sex and sexual violence, STDs including HIV, and discuss the intersection of these issues with patients. They should assess patients for issues of substance use, risky sexual activity, sexual health (including STDs and HIV) and sexual violence. As these behaviors are interrelated and may be connected to the overall health of the patient, they are important elements in understanding the patient's health problems and in creating a comprehensive health plan. Health care professionals should be prepared to treat the multiple substance use and sexual problems (including high-risk sex, sexual health, and sexual violence) of their patients or to provide referrals to professionals and organizations who can.

Government Programs and Insurance Providers Should Provide Adequate Funding for Treatment

Insurers should expand coverage to include costs of substance abuse treatment and mental health services. Time limitations of Medicaid, managed care systems and other health financing undermine the ability to provide interventions that are of sufficient duration.

Increase the Nation's Investment in Research in Prevention and Treatment

Research on the association between substance use and sexual activity and violence should be expanded and improved as an important step to preventing and breaking the links between substance use, sex and sexual violence. Public and private agencies should step up research to improve our understanding of the biological, psychological and social factors associated with the connection between substance use, sex and violence.

Appendix A
Data Limitations and Complications

There are considerable limitations to the data available on substance use, sex and the link between the two behaviors, making the connection difficult to understand and causality impossible to determine. The most important limitations are:

Sample Selection

Groups and individuals selected for study of substance use and sexual behavior usually are not representative of the larger national population. Studies are often of populations that are the most accessible which may result in studying groups at heightened risk (i.e., substance abuse treatment participants, inmates, and individuals receiving social services or health care) or at lower risk (i.e., students and middle-class respondents).

Most sex research, particularly that looking at the physiological impact of substances on sex, has been conducted on college students. Findings based on these studies may not be applicable to other age groups, as behaviors, beliefs, and even physiology may differ from younger or older populations. Further, college students account for only 38 percent of all 18- to 24-year-olds and they may differ by class, education level, racial/ethnic distribution and by differences in lifestyle and culture from other young adults.[1]

Data from arrestees and inmates are subject to self-report biases and are representative only of those perpetrators of sexual violence who have been arrested and prosecuted.

Studies of gay men and lesbians may also fail to capture an accurate cross-section of the gay population and especially of the larger population of men who have sex with men or women who have sex with women. Many studies of gay and bisexual men and women recruit their samples in bars, clubs, festivals or other locations where alcohol and drugs are more prevalent.[2] Because of our lack of knowledge of the magnitude or basic characteristics of the gay population in the United States, it is difficult to impossible to draw a nationally representative sample.[3]

Sex and drug research is further complicated by the possibility of racial, ethnic and gender bias. Laboratory studies of sexual response have largely been conducted on white males. Alcoholism treatment samples and studies of gay men also have tended to focus on white males. Research on illegal drug use or prostitution is more likely to recruit in inner-city and underprivileged areas that are disproportionately populated by African-Americans and Hispanics.

Looking at all of these studies together, as we have done in this report, allows us to develop a more comprehensive understanding of the level and context of risk in diverse populations, but does not eliminate the limitations of the sample selections.

Self-Selection and Reliability of Self-Reported Data

Issues of self-selection of samples and truthfulness of responses must also be considered. Individuals willing to participate in studies that address personal and often taboo, threatening or even illegal behaviors may be different than those who refuse to participate. Among those who do choose to be involved in this type of research, concerns about confidentiality may prevent them from truthfully disclosing their actual levels of substance use and risky sexual activity. Responses may also be biased due to inaccurate recall of past behaviors.

Study Techniques

Different methods of surveying the same individuals can result in different rates of substance use and sexual behavior.[4] The 1998 National Survey of Adolescent Males (NSAM) compared survey responses recorded with pen and paper and those taken with a computer assisted self-interviewing method (audio-CASI)[5] and found that reports of sex while under the influence of drugs or alcohol and other high risk sexual activity were significantly higher when using the computer-based technology. Likewise, surveys employing in home face-to-face interviews with teens produce lower estimates of substance use and sexual activity than those using paper and pencil questionnaires in a classroom setting.

Laboratory Research Techniques

Most of the controlled laboratory-based studies included only college-aged volunteers with unknown histories of sexual activity or alcohol use.[6] Participation by older, less healthy or more culturally diverse groups may produce different results. The doses of alcohol used in the majority of the controlled studies are relatively low, offering limited ability to predict the effect of higher doses of alcohol on sexual function. Moving from the laboratory setting to the "real world," where different expectations, external cues, and interpersonal interactions can greatly affect sexual function, may affect the results.

Definitional Issues

Some studies fail to specify what is meant by "sex", "safe sex" or "sexual violence," leaving interpretation up to the individual respondent; use vague labels such as "probably safe" or "probably risky;" or do not specify whether threats of violence are or should be included with experiences of violence. Studies may be imprecise in defining substance abuse, use and addiction or may fail to consider the impact of both alcohol and drug use together. These distinctions are necessary since there are different effects of alcohol or drug use or the combination of the two on sexual activity and sexual violence,[7] and all drugs are not used in similar circumstances to obtain similar effects. Failure to specify these terms results in incomplete understanding of sexual behaviors and experiences of violence, and of the impact of alcohol or drugs.

Unknown Sequence of Behaviors

Most of the research available on substance use and sexual behavior does not specify adequately the sequencing of behaviors, leaving it up to speculation as to which behavior came first.[8] Surveys often ask the participants about both substance use and sexual activity within a certain time frame (i.e., during the prior six months). Such data tell little about the actual relationship between the consumption of alcohol or drugs and sexual practices, only that the participants both had sex and used substances at some points during the specified time period. These data do point to the relevance of lifestyles that are characterized by both drinking or drug use and sexual activity, but the causal connection remains unknown.

Older Data

In light of the potentially dramatic changes in a generation's feelings about sex and sexual behavior, it is important that findings be as up-to-date as possible. This is not always an easy task in a field in which comparatively little research has occurred. We have attempted to restrict our analysis as much as possible to data from the 1990s, but have included pivotal earlier studies if we think that their findings continue to be relevant.

APPENDIX A

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Appendix B

Sample Ads

Please see the printed copy for this section.

Appendix C
Overview of the Physiology of Human Sexuality

Sexual arousal and sexual function are complex interactions of thoughts, feelings, sensory organs, neurochemistry and hormonal reactions. In addition to the sexual organs, these functions involve the brain (cortex, limbic system), peripheral nervous system, endocrine glands and circulatory system.

Following is a summary of the basic physiology of the systems that control and affect sexual responses.

Central Nervous System: Brain Plus Spinal Cord

The central nervous system controls the release of neurotransmitters, such as serotonin, norepinephrine, and dopamine, that send or relay messages to and from the brain.

Hypothalamus: Part of the limbic system of the brain, the hypothalamus integrates the actions of the endocrine and nervous systems, regulates the pituitary hormones, controls the endocrine system and controls sexual responses to genital stimulation and orgasm.

Pituitary Gland: Regulates the metabolic activities of peripheral endocrine glands through the release of hormones.

Peripheral Nervous System

The peripheral nervous system has two main parts, the somatic and the visceral.

- The *somatic nervous system* controls the contraction and relaxation of the body's muscles.
- The *visceral nervous system*, or *autonomic* system, itself has two components that work in opposite ways: the sympathetic and parasympathetic:

Sympathetic Nervous System:	Parasypathetic Nervous System:
Increased heart rate and blood flow	Decreased heart rate and blood flow
Sweating	Decreased sweating
Constriction of blood vessels (associated with orgasm)	Dilation of blood vessels (associated with erection, lubrication)

In males, erection is caused by vasodilation (increased blood flow) of arteries in the penis (controlled through the parasympathetic nervous system). The veins are compressed so less blood is drained away from the penis. The central nervous system control of erection is through the hypothalamus (which controls the parasympathetic system), and the *sacral plexus* of the spinal cord (reflexive erection during sleep). In males, arousal and sexual function control goes from hypothalamus to pituitary to testes.

In females, the mucus that lubricates the vagina comes from glands in the cervix area of the uterus. The clitoris fills with blood when stimulated, increasing stimulation due to its numerous nerve endings.

In men, ejaculation is under the control of the sympathetic nervous system. When the impulses that cause erection reach a critical level, a spinal reflex is initiated that sends impulses over the sympathetic nerves serving the genital organs triggering a series of muscle contractions. In women, orgasm is the result of a similar sequence of reflex responses, causing vaginal and uterine contractions. Thus, substances that affect the functioning of the sympathetic nervous system can affect the ability to reach orgasm.

Hormonal System

Adrenal Glands: The *gonadcorticoids* are adrenal sex hormones, and have a relatively small effect on the testes and ovaries. These hormones include androgens (similar to testosterone) and small amounts of estrogen and progesterone in females. The adrenal androgens may affect sex drive in females. Epinephrine and norepinephrine are hormones secreted by the adrenals in response to positive or negative stress.

Gonads (Testes, Ovaries): These glands secrete hormones that help regulate reproductive functions: testosterone, luteinizing hormone, follicle-stimulating hormone in males; estrogens, progesterone in females (see below).

Following are the key hormones that help regulate or control various aspects of sexual functioning. Either through direct affects on hormonal secretion, or indirect affects by disrupting neurotransmission, many drugs can affect the release or circulation of various hormones, and thus interfere with healthy sexual functioning.

Hormones Affecting Both Males and Females

- *Luteinizing Hormone (LH)* (one of the gonadotropins; secreted from anterior pituitary, controlled by hypothalamus): stimulates further development of the female egg, stimulates ovulation, increases progesterone and estrogen secretion, stimulates testosterone secretion in males

- *Follicle Stimulating Hormone (FSH)* (one of the gonadotropins; secreted from anterior pituitary, controlled by hypothalamus): I ncreases estrogen secretion, and testosterone production. Stimulates ovulation, sperm production/maturation

- *Testosterone* (secreted from testes, ovaries, and adrenal glands, controlled by LH; also produced in adrenal glands): stimulates libido in men and women. Increases sperm production, controls male primary and secondary sex characteristics, inhibits LH secretion, regulates sex drive. Also increases general aggressiveness

- *Estrogen* (secreted from ovaries and adrenal glands, controlled by FSH): maintains vaginal lining, female sex characteristics, stimulates maturation of oocyte, inhibits FSH secretion, increases LH secretion, regulates menstrual cycle

- *Gonadotropin Releasing Hormone (GRH)* (secreted from hypothalamus): controls pituitary hormonal secretions of FSH and LH.

Hormones Affecting Males Only

- *Inhibin* (secreted from testes): inhibits FSH secretion, so inhibits testosterone release.

Hormones Affecting Females Only

- *Progesterone* (secreted from corpus luteum [in ovaries], adrenals; controlled by LH): stimulates thickening of uterine wall, formation of mammary ducts and breast development, regulates menstrual cycle.

- *Oxytocin* (secreted from posterior pituitary, controlled by hypothalamus): stimulates uterine contractions in labor, milk production after birth.

- *Prolactin* (secreted from anterior pituitary, controlled by prolactin-releasing and inhibiting hormones in hypothalamus): stimulates milk production, breast development during pregnancy.

- *Prostaglandins* (secreted by all body cells): mediates hormone response, stimulates muscle contractions.

Neurotransmitters

All drugs affect the neurochemistry of the brain in some way and many neurotransmitters in the brain have some role in regulating sexual function. Following are the key neurotransmitters that can affect sexual responses, either directly or indirectly:

- *Amino Acid Group*
  Gamma-amino butyric acid (GABA) – inhibitory
  Acetylcholine – excitatory and inhibitory, neuromuscular, neuroglandular transmission
  Glutamic acid - excitatory
  Aspartic acid - excitatory
  Glycine - inhibitory

- *Monamine Group*
  Dopamine – arousal, motor activity
  Histamine - excitatory
  Norepinephrine – excitatory and inhibitory: arousal, motor activity, visceral functions, has hormonal action when secreted into the blood, vasoconstriction, increased heart rate
  Serotonin – sleep, mood (including depression, elation, insomnia, hallucinations), appetite, pain

- *Neuropeptide Group*
  Endorphins – analgesic
  Substance P – mediates pain

Appendix D
Studies on the Connection Between Alcohol, Drugs and Condom Use

The following studies examine the association between alcohol use and condom use and drug use and condom use.

Alcohol Use and Condom Use

Samples of Adolescents

<☐ Hingston, Strunin, Berlin and Heeren's analysis of a telephone survey of 1,773 16- to 19-year-olds in Massachusetts during 1988 found that teens who were heavier drinkers (who averaged five or more drinks daily) were 2.8 times less likely to use condoms than others. Among those who were drinkers, 16 percent reported using condoms less after drinking.[1]

Summary of Research on Alcohol and Condom Use (n=30)

Studies of:	*Found an association:*		
	Yes	**No**	**Mixed**
Adolescents/Teens	1	1	1
College students	2	2	1
Adults/Young adults	6	7	2
Gay/Bisexual men	1	5	1
Total	**10**	**15**	**5**

1☐ Doljanac and Zimmerman conducted interviews with 824 mostly African-American 9th graders (all of whom had a grade point average of 3.0 or less) and did not find an association between general alcohol or drug use and condom use for either African-Americans or whites after controlling for other variables.[2]

⦶☐ Dermen, Cooper and Agoch's study of adolescents found that level of risk at last intercourse (which included nonuse of condoms, sex with someone of unknown HIV status and sex with multiple partners) was related to alcohol use only for those teens who held high expectancies that alcohol would be a disinhibiting or promoting factor in sexual behavior. When looking at the first time the adolescent had had sex, alcohol was found to be associated with risk-taking for teens with both high and with low expectancies that alcohol would facilitate sex. However, the relationship was stronger for those teens with high expectancies.[3]

Explanation of Symbols

<☐ **YES.** The study found a connection between alcohol or drug use and condom use.

1☐ **NO.** The study did not find a connection between alcohol or drug use and condom use.

⦶☐ **MIXED.** The study found mixed evidence or variation in the connection between alcohol or drug use and condom use.

Samples of College Students

<☐ Analysis of a sample of 160 college students by McNair, Carter and Williams found that greater alcohol use was related to lower levels of past condom use.[4]

<☐ Wechsler, Davenport, Dowdall, Moeykens and Castillo's mail survey of 17,592 students* at 140 American colleges found that those who binged on alcohol in the last two weeks were more likely to say that their alcohol use was related to their nonuse of condoms. Twenty-two percent of frequent bingers, 10 percent of infrequent bingers, and 4 percent of nonbingers said that they did not use protection when having sex.[5]

1☐ Prince and Bernard's research on college students found that condom use was not significantly associated with alcohol consumption prior to sexual activity.[6] Thirty-eight percent of those respondents who report frequently drinking prior to sex report that they never use condoms, as do 54 percent of those who occasionally drink prior to sex and 48 percent of those who never drink prior to sex.

1☐ Desiderato and Crawford did not find an association between drinking at a specific event and failure to use condoms at that time among their sample of college students. More than half of the sample (59 percent) responded that they had used alcohol the last time they had sex.[7] However, those students who reported using alcohol prior to sex were as likely as those students who did not use alcohol to report having used a condom.

⦶ ☐ A study by Harrington, Brigham and Clayton of 1,342 mostly white fraternity and sorority members found that among both men and women as level of drinking increased so did noncondom use. However, the difference was only significant for men.[8]

Samples of Adults/Young Adults

<☐ Wingood and DiClemente found that frequent alcohol use in the month prior to the interview was associated with decreased condom use during that time among their sample of African-American women.[9] Women who used alcohol on 20 to 30 days of the month prior were almost three times more likely to report inconsistent condom use than women who drank less frequently.

<☐ A Scottish study by Begnall, Plant and Warwick of 350 males and 428 females (aged 25 and 26) found that while general alcohol use was not significantly related to condom use, those respondents who reported frequently combining alcohol and sex were seven times less likely to report always using condoms.[10]

<☐ Using data from a sample of 321 nondrug using individuals from high-risk areas, Morrison, DiClemente, Wingood and Collins found that while heavy use of alcohol was significantly associated with noncondom use in the 30 days prior, light or moderate use was not. Among those who did not drink in the past 30 days, 45 percent reported not using a condom during this time, compared to 62 percent of those who were frequent drinkers (used alcohol on 16 or more days in the last month. Those who were moderate drinkers (used alcohol on one to 15 days of the last month) were equally as likely as nondrinkers to report condom nonuse (42 percent).[11]

<☐ Flanigan and Hitch found that among women surveyed in the late 1980s about their first sexual experience, those who were drinking during their first time were less likely to have used contraception (condoms as well as other forms of birth control). Thirty-four percent of drinkers used protection compared to 66 percent of those who did not drink.[12] However, when asked

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* This survey had a 69 percent response rate.

directly, only 16 percent of respondents thought that alcohol use affected their decision to use contraception during their first sexual encounter.

<☐ Among Ford and Norris' sample of African-Americans and Hispanics (aged15-24), the quantity of alcohol consumed prior to sexual encounters was found to be associated with decreased use of condoms (with a given partner).[13] This relationship was strongest for men, and particularly for African-American men.

<☐ Robertson and Plant's 1985 survey of 355 Scottish youth (aged 16-20) found that alcohol was related to nonuse of contraception at first sexual episode (condoms or other forms of birth control). Of those males who had drunk at the time of first sexual intercourse, 13 percent used contraception. Of those males who did not drink, 57 percent used contraception. Of those females who had drunk prior to first intercourse, 24 percent used contraception. Of those females who did not drink, 68 percent used contraception.[14]

1☐ Respondents in Graves and Leigh's study of young adults (aged 18-30) were asked how many times they had sex in the last year and how many times they had been under the influence of alcohol when having sex.[15] Those who reported more incidences of sex while under the influence were actually more likely to use condoms. This finding was significant for those who had sex with only one partner in the last year and was not for those with multiple partners. When looking at drinking and condom use during a discrete event, no significant differences were found in condom use during episodes of drinking sex vs. nondrinking sex with either primary or with nonprimary partners.

1☐ Leigh analyzed data from a 1987 sample of 844 mostly white adults (aged 18-50) in San Francisco found no association between drinking in conjunction with sex and level of sexual risk (including nonuse of condoms for vaginal or anal sex) after controlling for frequency of sexual involvement.*[16]

1☐ Temple and Leigh's analysis of 968 interviews from a random sample of households in the San Francisco Bay area (response rate of 68 percent) failed to find a significant relationship between alcohol consumption and condom use the last time the respondent had sex with a new partner, after controlling for other variables.[17]

1☐ A Swiss HIV study by Lauchi *et al.* of 724 adult volunteers (aged 17-55) did not find a significant association between having sex under the influence of alcohol and general inconsistent condom use.[18] The 62 percent of those who combine sex with alcohol and report inconsistent condom use is not significantly different than the 53 percent of those who did not combine alcohol and sex yet who also report inconsistent condom use.

1☐ Leigh and Miller's analysis of interview data from 1,378 young adults (aged 16-30) in Scotland found that use of alcohol during an sexual episode was not significantly associated with condom use. In fact, those who report combining alcohol and sex were more likely to report lifetime condom use than those who did not combine alcohol and sex.[19]

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* The low response rate in this survey (24 percent) suggests that results should be interpreted with caution.

1 ☐ Based on data from a national sample of 2,058 adults, Temple, Leigh and Shafer found that when looking at two sexual encounters, one involving alcohol and the other not, the respondents were equally likely to use a condom in the situations involving alcohol as in the sober incidents.[20]

1 ☐ Testa and Collins' research on young single women (aged 20-35) did not find significant differences in condom use between reported sexual events where drinking had taken place and those that did not involve alcohol.[21]

◐ ☐ Leigh, Schafer and Temple's analysis of a national sample of adolescents and young adults (aged 12-30) found that alcohol use at first sexual episode was not significantly related to condom use for the entire sample or for those that initiated sex after 1985. However, for those who had their first sexual encounter before 1985, condom nonuse was significantly associated with alcohol use.[22] This change may be due to the impact of AIDS and an increased awareness of the need to practice safer sex in all circumstances.

◐ ☐ Graves and Hines research on a national sample of over 2,800 adults found that for African-American women, drinking during a specific sexual encounter with a new partner predicted failure to use a condom. There was not a significant relationship between drinking and condom use for white women, white men or African-American men. For both male and female Hispanics, drinking during the event was significantly associated with increased condom use.[23]

Samples of Gay and Bisexual Men

< ☐ Calzavara *et al.*'s study of homosexual and bisexual men found that those who used alcohol during a sexual encounter had a higher level of sexual risk-taking (with a score of 113.7, based on frequency of participation in sexual behaviors deemed at risk for transmission of HIV and number of sexual partners) than that of those who did not use alcohol (60.8) and than those who used alcohol but not during sex (79.4).[24]

1 ☐ Siegel, Mesagno, Chen and Christ's research on a longitudinal study of 100 homosexual males in New York city did not find alcohol use to be a significant predictor of increased high-risk sexual activity (behaviors considered at high-risk for the transmission of HIV including noncondom use during anal intercourse).[25] However, the variable approached significance and the authors believe that if its use was directly tied to sexual activity in the questionnaire, a significant connection may have emerged.

1 ☐ Mayne, Acree, Chesney and Folkman conducted interviews with 100 homosexual men during the year before and the year after losing a partner to AIDS. They found that while alcohol use remained stable during the two years studied, involvement in sexual risk (unprotected anal sex) varied.[26] General alcohol use did not explain increases in sexual risk. General drug use (mostly marijuana) also did not explain increases in sexual risk.

1 ☐ Ryan, Huggins and Betty's analysis of data on HIV-negative mostly white gay men did not find an association between alcohol use and higher-risk sex (anal intercourse that was unprotected half the time or more) during a six month period.[27] However, this research did find some evidence that the use of other drugs during sex was associated with risk behaviors

1 ☐ Martin and Hasin's three year (1985, 1986 and 1987) longitudinal study of 604 gay men who did not have AIDS did not find an association between usual drinking patterns or alcoholism and

unprotected anal sex. This study did find that alcohol use and abuse may increase rates of relatively low-risk sex (i.e. unprotected oral sex).[28]

1 ☐ A Flemish study by Bolton *et al.* of 379 gay and bisexual men found that alcohol was not found to be connected to increased involvement in high-risk sex (unprotected anal sex) for single men. In fact, single men who drank more frequently were found to be less likely to engage in risky sex.[29]

⦶ ☐ Seage *et al.*'s sample of 508 gay and bisexual men mostly between the ages of 18 and 24, reported sexual encounters that occurred while drinking were no less likely to involve unprotected anal intercourse than those that occurred while sober. However, when looking at type of partner, those with a steady partner were less likely to have unprotected sex while drinking than when sober while those with a nonsteady partner were more likely to have unprotected sex while drinking than while sober. It is possible that alcohol may be both a protective and a risk factor, depending on the type of partner and the situation.[30] Increased condom use when drinking with a steady partner may be the result of established condom use patterns; alcohol may thus serve to reinforce these existing behavioral patterns.

Drug Use and Condom Use

Samples of Adolescents

< ☐ Hingston, Strunin, Berlin and Heeren's analysis of a telephone survey of 1,773 16- to 19-year-olds in Massachusetts during 1988 found that teens who were marijuana users were 1.9 times less likely to use condoms generally.[31]

< ☐ Shirer *et al.*'s analysis of a Massachusetts sample of 3,054 public high school students found that lifetime and recent substance use was associated with less condom use at last sexual episode.[32]

1 ☐ Doljanac and Zimmerman's analysis of ninth graders found that after controlling for other important variables marijuana use was not significantly associated with general condom use.[33]

Samples of Adults/Young Adults

< ☐ Moliter *et al.*'s research on 258,567 sexually active noninjection drug-using men and women who went for HIV testing during an 18 month period found that methamphetamine use was related to decreased condom use during vaginal and anal intercourse.[34]

1 ☐ Graves and Leigh did not find a relationship between the use of substances generally, or marijuana specifically, and condom use among a national sample of young adults.[35] Those who used marijuana were slightly less likely to use condoms consistently in the last year (eight percent vs. nine percent of nonusers), but this difference was not statistically significant.

1 ☐ Leigh and Miller's study of Scottish young adults found that use of drugs during an sexual episode was not significantly associated with condom use. In fact, those who report combining drugs and sex were more likely to report lifetime condom use than those who had not had sex under the influence of drugs.[36]

◐ ☐ Leigh's research on adults in San Francisco found that drug use in conjunction with sex predicted risky sexual behavior (including nonuse of condoms) for gay and bisexual men, but not for heterosexuals. Among gay/bisexual men, risky sex was associated with the use of cocaine and with the use of other drugs (predominately nitrites). Alcohol was not associated with risky sex for this group.[37]

Samples of Gay and Bisexual Men

< ☐ Siegel *et al.*'s study of homosexual males found that drug use in conjunction with sex was the strongest predictor of sexual risk (behaviors considered at high risk for the transmission of HIV including noncondom use during anal intercourse).[38]

< ☐ Paul *et al.*'s sample of gay and bisexual men in substance abuse treatment found that those with a history of injection drug use were more likely to report unprotected anal sex in the previous 90 days (27 percent of injection drug users had unprotected sex compared to 17 percent on noninjectors).[39] This study also found that unsafe sex was more likely to occur after using drugs than after drinking alcohol.

< ☐ Calzavara *et al.*'s study of gay and bisexual men in Canada, found that drug use was associated with an increased risk score (derived from a ranking of the potential for a behavior to transmit HIV that included the nonuse of condoms). Those who used drugs had a slightly but not significantly higher score than those who abstained from drug use. Those respondents who used drugs in conjunction with sexual activity had a significantly higher risk score (31.9) than those who did not use drugs (8.5) and those who used drugs but not in combination with sex (14.3). Multivariate analysis found that the use of nitrites during sex and the use of marijuana during sex was significantly and strongly associated with an increased sexual risk score. However, cocaine use did not remain a significant predictor of sexual risk, possibly due to the low number of cocaine users in this sample.[40]

< ☐ Frosch *et al.*'s study of gay and bisexual male methamphetamine abusers found that participants frequently used drugs before sex and rarely used condoms. Sixty-three percent reported insertive anal sex without a condom and 50 percent reported receptive anal sex without a condom in the past year.[41]

Alcohol and/or Drugs and Condom Use: Type of Substance Not Specified

< ☐ O'Hara, Parris, Fichtner and Oster's study of high school students in drop-out prevention programs found that those who used alcohol and/or drugs the last time they had sex were less likely to have used a condom at last sexual experience.[42] Those who drank more during the last month were also found to be less likely to have used a condom at last sexual experience.

< ☐ Michael, Gagnon, Laumann and Kolatta's research found that adults who said that they or their partner was "strongly affected" by alcohol and/or drugs at last sexual encounter were less likely to use condoms (in the past 12 months).[43] This finding was stronger for those reporting sex with a secondary partner.[44]

1 ☐ Fortenberry *et al.* conducted a longitudinal study of 82 adolescent females (aged 16-19). Participants kept diaries of their coital events over an average of 9.2 weeks.[45] While 27 percent of the adolescent females recorded at least one coital event in which they were drinking and/or using

drugs prior, substance use did not predict condom use. Among those who reported no substance-associated sex, condoms were used during 53 percent of coital episodes. Among those who reported at least one substance-associated coital episode, condoms were used during 58 percent of coital episodes that did not involved substances and 63 percent of those that did involve drinking or drug use. The participant's usual pattern of condom use was the best predictor of condom use during a specific sexual event, regardless of whether substances were being used prior to the event.

APPENDIX D

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Appendix E
Survey Information and Methodology for Data Analyses on Adolescents

The 1997 Youth Risk Behavior Survey (YRBS)

The 1997 Youth Risk Behavior Survey (YRBS) is a national school-based survey of adolescents in grades nine through 12 that has been conducted biennially by the CDC since 1990. The YRBS includes questions about behaviors that result in unintentional or intentional injuries, tobacco use, alcohol and other drug use, risky sexual behaviors, dietary behavior and physical activity. A total of 16,262 student responses were obtained from 110 schools around the country. Due to the small number of Asian students in the sample, we limited our analysis to white, African-American and Hispanic students.

Demographics of YRBS Students, by percentage

Female	51
Race	
White	34
African-American	28
Hispanic	28
Asian	5
Age	
14 or younger	10
15	22
16	25
17	27
18 or older	17
Parents' education	
Mother completed High School	82
Father completed High School	83
Mother completed College	29
Father completed College	30
Urbanicity	
Urban	50
Suburban	41
Rural	9

Sample Design

A three-stage cluster sample design was used by the CDC to produce a nationally representative sample of United States students in grades nine through 12. Counties were initially sampled, taking into account urban or non-urban settings and race and ethnicity. In the sampled counties, schools were selected, oversampling for African-American and Hispanic students. In each sampled school, one or two classes of a required subject were randomly selected. All students in the selected classes were eligible to participate. An 88-item anonymous pen and paper questionnaire was administered to the students by trained data collectors. Prior to the administration of the survey, parental consent was obtained. The school response rate was 70 percent and the student response rate was 86 percent. Data analysis included two variables to adjust for the probability of selection at primary and secondary sampling stages and a third weighted variable to adjust for nonresponse and oversampling of African-Americans and Hispanics. Weighted variables were included in CASA's analysis to adjust for the way in which both schools and subjects were sampled, and for the over-sampling of African-American and Hispanic students relative to their proportion of the population.

Measures Used in CASA's Analysis

Sexual Experience. Three binary (yes/no) variables were defined by CASA to examine sexual risk-taking in the YRBS sample. The first variable assessed whether or not the student had ever had sex. This variable was measured by one survey item asking if the student has had at least one act of sexual intercourse in their lifetime. The second variable assessed the student's use of condoms. One item on the questionnaire asked only sexually active students if they or their partner had used a condom during their last (most recent) sexual intercourse. The third variable, measured by one question on the survey,

127

assessed whether or not sexually active students have had sex with four or more partners over the course of their lifetime.

Alcohol Use. Three binary variables were created by CASA to more precisely define alcohol use among the YRBS sample. The first variable assessed whether or not the student had ever drank (more than a few sips) of alcohol in their lifetime. The second variable determined whether or not the student was a frequent alcohol drinker, which was defined as having consumed alcohol on ten or more separate occasions in their lifetime. This variable was created to capture students who had experimented with alcohol, but to exclude students who have only tried alcohol in controlled supervised setting (e.g., family functions, weddings). By making 10 episodes of drinking the cutoff point, we are aware that we may be excluding students who have not been frequent drinkers (those who only recently started drinking, for example), but who may be consuming alcohol in dangerous quantities. However, we were constrained by the limits of the survey item. The third variable assessed heavy episodic drinking by determining if the student reported recent binge drinking, which is defined by the CDC survey as having had five or more drinks on one occasion in the past 30 days. Dangerous levels of intoxication may occur from lower quantities of alcohol consumed in one setting, especially for adolescents and for females, but again we are limited by the data available.

Drug Use. Three binary variables were created by CASA to measure drug use. The first variable assesses whether or not a student has ever used an illicit drug (including marijuana, cocaine, inhalants, steroids, or "other" drugs including heroin, LSD, PCP, mushrooms, ecstasy, speed, or ice) on one or more occasion during their lifetime. Six questionnaire items, each assessing use of a different drug, were used to measure this variable. The second variable we created assessed whether or not the student is a heavy drug user. Heavy drug use was defined by CASA as the use of any illicit drug 20 or more times in the subject's lifetime. The third variable measured heavy recent drug use, and was defined by CASA as the use of marijuana or cocaine 10 or more times in the past 30 days. Two questions assessing the student's use of marijuana and cocaine were used to measure this variable. Information was not gathered in this survey on the use of other drugs within the past 30 days.

Prevalence of Sexual Activity in the YRBS

More than half of the teens in the YRBS sample have had sexual intercourse--including 70 percent of 18-year-olds. Male students and African-American students are more likely to be sexually active.* Eighteen percent of teens had initiated sexual intercourse at age 13 or younger. Male students (25 percent) and African-American students (34 percent) were significantly more likely to begin having sex at a young age compared to females (12 percent), whites (10 percent) and Hispanics (14 percent). More than one in three (37 percent) of sexually active teens have had sex with four or more partners in their lifetime. These data contain information only about sexual intercourse.†

Percentage of YRBS Students Who Report Having Had Sexual Intercourse, by Race and Gender

	White	African-American	Hispanic	Total
Female	45	67	43	51
Male	42	82	60	58
Total	43	74	51	54

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* When looking at the intersection between race and gender, there were no statistically significant differences in sexual activity among white males and females, while such a difference remained between black and Hispanic males and females.

† However, intercourse is not the only sexual activity participated in by teens. Other research finds that significant numbers of teens who abstain from intercourse participate in other sexual activity including mutual masturbation and oral sex. The use of alcohol and drugs is connected to such sexual activity.

The sexual partners of many female adolescents are adult men. Approximately two of five (38 percent) sexually active high school girls in the YRBS sample report that their last sexual partner was 19-years-old or older--including 16 percent whose partner was 21 or older. Among sexually active girls 15-years-old or younger, 16 percent report that their last sexual partner was 19-years-old or older.

Percentage of Sexually Active YRBS Students Who Report High Risk Sexual Activity, by Race

	White	African-American	Hispanic	Total
Used a condom at last sexual encounter	58	67	50	60
Had four or more sex partners	29	50	29	37
High at last sex	28	15	23	21

Only three of five sexually active high school students used a condom the last time they had sex. African-Americans were significantly more likely to have used a condom. Additionally, males (64 percent) appear to be better condom users than females (54 percent).

The National Longitudinal Study of Adolescent Health, 1995 (Add Health)

The National Longitudinal Study of Adolescent Health (Add Health) is a school-based study of the health-related behaviors of adolescents in the United States that includes a sample of in-home interviews. Questions are designed to assess the behavior and conditions that contribute to both positive and negative health outcomes, including sexual activity, substance use, health care, fitness habits, violence and chronic and disabling health problems.

Demographics of Add Health Students, by percentage

Female	51
Race	
White	67
African-American	16
Hispanic	5
Other	12
Age	
14 or younger	34
15 or 16	34
17 or older	32

The in-school sample was selected from a data base collected by the Quality Education Data, Inc. A sample of 80 eligible high schools was selected (eligible schools must include an 11th grade and have an enrollment of more than 30). The sample was stratified by region, urbanicity, school type, ethnic mix and size. More than 70 percent of the originally sampled high schools participated and those who refused were replaced by another school within the stratum. The high schools selected helped to identify their feeder schools (schools that include seventh grade that send their graduates to that high school). One feeder school was selected for each high school. The recruitment effort resulted in a pair of schools in each of the 80 communities although, since some high schools spanned grades seven to 12, they functioned as their own feeder school. There are 134 discrete schools in the study.

The Wave 1 in-home sample was based on all those students sampled for the in-school portion. Students in each school were stratified by grade and sex and about 17 students were randomly chosen from each strata so that a total of approximately 200 students were selected from each of the 80 pairs of schools. A total core sample of 12,105 adolescents were interviewed. African-American, Chinese, Cuban and Puerto Rican students were oversampled. The two-hour in-home interview was conducted between April and December 1995. All data were recorded on laptop computers. For less sensitive sections, the interviewer read the questions and entered the respondent's answers. For more sensitive sections (such as those on sexual activity or substance use), the respondent listened to pre-recorded questions through earphones and entered the answers directly (audio-CASI). The in-home interviews explored sexual partnerships and substance use in addition to other health issues and psychosocial questions.

The unweighted number of cases in the Wave 1 in-home sample is 18,509. The data were weighted to approximate a nationally representative sample of adolescent students.

Measures Used in CASA's Analysis

Sexual Experience. Four binary (yes/no) variables were defined by CASA to examine sexual risk-taking. The first variable assessed whether or not the student had ever had sexual intercourse. This variable was measured by one questionnaire item asking if the student has had at least one act of heterosexual vaginal/penile intercourse in their lifetime. The second variable assessed the student's use of condoms during their last sexual intercourse. This is a composite of three questionnaire items used to assess whether multiple contraceptive methods were used. The third variable, also based on these three questions, determined if the student used any form of birth control during last sex (including but not limited to condom use). The fourth variable is whether or not the student has ever been told by a doctor or a nurse that they had a sexually transmitted disease and is the composite of a series of questions detailing specific sexually transmitted diseases.

Alcohol, Drug Use, and Sexual Activity Among the Add Health Teens, by percentage

	14 or younger	15 or 16	17 or older	Total
Drink alcohol[a]	56	74	81	73
Binged on alcohol in the past 12 months[b]	27	41	55	44
Ever used any drug	18	32	39	29
Ever used marijuana	14	30	38	27
Ever used drug other than marijuana[c]	9	14	15	12
Ever had sexual intercourse[d]	14	39	62	38
Among those who are sexually active:				
Used a condom at last sex	55	58	54	56
Used any form of contraception[e]	61	65	68	66
Ever had a STD	4	6	8	7

[a] Not with parents or other adults.

[b] Drank five or more drinks in a row.

[c] Includes cocaine, inhalants, and "other drugs."

[d] Defined as heterosexual vaginal intercourse.

[e] Includes condoms, withdrawal, rhythm, birth control pills, sponge, foam, diaphragm, IUD, Norplant, ring, Depro Provera, contraceptive film or "other method."

Alcohol Use. Two binary variables were created by CASA to examine alcohol use among the Add Health sample. The first variable assessed whether or not the student ever drinks alcohol when not with parents or other adults in their family. The second variable examined binge drinking, which is defined as having had five or more drinks in a row on at least one day in the past 12 months.

Drug Use. Three binary variables were created by CASA to measure drug use. The first variable assesses whether or not a student has ever used an illicit drug (marijuana, cocaine, inhalants or "other" drugs including LSD, PCP, mushrooms, ecstasy, speed, ice, heroin or pills without a doctor's prescription) on one or more occasion during their lifetime. Four questionnaire items, each assessing use of a different drug, were used to measure this variable. The second variable assessed whether or not the student ever used marijuana. The third variable assessed whether the student ever used any drug other than marijuana (cocaine, inhalants, or "other" drug). There were some extreme answers (i.e. first smoked marijuana at one year old) which were recoded as missing data.

Appendix F
The 1997 Arrestee Drug Abuse Monitoring Program

CASA analyzed data from the 1997 Arrestee Drug Abuse Monitoring Program (ADAM) which drug tests samples of adult and juvenile arrestees in cities across the United States. In 1997, 23 cities were ADAM sites. These cities include: New York, NY; Washington, DC; Portland, OR; San Diego, CA; Indianapolis, IN; Houston, TX; Ft. Lauderdale, FL; Detroit, MI; New Orleans, LA; Phoenix, AZ; Chicago, IL; Los Angeles, CA; Dallas, TX; Birmingham, AL; Omaha, NE; Philadelphia, PA; Miami, FL; Cleveland, OH; San Antonio, TX; St. Louis, MO; San Jose, CA; Denver, CO; and Atlanta, GA. In 1998, ADAM was expanded to 35 cities. Prior to 1997, ADAM was known as Drug Use Forecasting (DUF). The methodology has been altered and the sites expanded under the ADAM program. For more information about ADAM methodology and changes from DUF to ADAM, see the National Institute of Justice's 1998 ADAM Annual Report.

At each site, trained interviewers collect voluntary and anonymous interviews (approximately 20 minutes in length) and urine specimens from adult male, adult female, juvenile male and juvenile female arrestees. Ten drugs are included in the screen: marijuana, opiates, cocaine, PCP, methadone, benzodiazepines (Valium), methaqualone, propoxyphene (Darvon), barbiturates and amphetamines. Samples of arrestees are approached within 48-hours of their arrest and are asked to participate in the study. In most sites, more than 80 percent of the individuals approached agree to the interview and, of those, more than 80 percent agree to give urine specimens. Our analysis looked only at adult male participants (n = 19,736).

Sex offense arrestees include those adult males arrestees where "sexual assault/rape" or "sex offense" was either the most serious, second most serious or third most serious charge. Arrestees charged with a sex offense represent almost two percent (1.6) of all adult male arrestees (n = 312).

Other violent offenders included those adult males who were not arrested for a sex offense and whose most serious charge was a violent offense. These violent offenses include assault, blackmail/threat, manslaughter, murder/homicide, robbery, weapons, domestic violence, child abuse, partner/spouse abuse, child neglect and arson. Other violent offenders represent 27.9 percent (n = 5,504) of the adult male arrestees in this sample.

Appendix G

The 1991 Survey of Inmates in State Correctional Facilities: Methodology and Data Limitations

Methodology

CASA analyzed data from the U.S. Department of Justice, Bureau of Justice Statistics (BJS) Survey of Inmates in State Correctional Facilities. The most recent survey of state prison inmates was conducted in 1991 and gathered information on a sample of 13,986 inmates. Similar surveys were conducted in 1974, 1979 and 1986. A new state inmate survey was conducted in 1997 but the data are not yet available for analysis.

During June, July and August 1991, inmates were confidentially interviewed about their current offense and sentence, criminal history, victim characteristics, family and personal background, prior drug and alcohol use and treatment and participation in educational programs and other services while in prison.

The sample was taken from a universe of 1,239 state prisons either enumerated in the 1990 Census of State and Federal Adult Correctional Facilities or opened between completion of the census and February 29, 1991. The sample design was a stratified two-stage selection: selecting prisons and then selecting inmates in those prisons. Overall, 273 prisons were selected: 226 male facilities and 51 female facilities, with four of the facilities holding both men and women.

In the second stage, inmates were selected for interviewing. A systematic sample of inmates to be interviewed was selected for each facility using a random start and a total number of interviews based on the size of the facility and the sex of the inmates held. About one in every 52 men and one in every 11 women in prison were included in the survey. A total of 13,986 interviews were completed for the state survey for an overall response rate of 93.7 percent.

Based on the completed interviews, estimates for the entire population were developed using weighting factors derived from the original probability of selection in the sample. These factors were adjusted for variable rates of nonresponse across strata and inmates' characteristics. The sample was adjusted to midyear custody counts projected from data obtained in the National Prisoner Statistics series (NPS-1).

CASA defined a sex offender as any inmate who is currently serving time for any sex offense, either alone or in addition to other offenses. Sex offenses included committed or attempted rape, statuary rape, sexual assault, lewd act with child and/or forcible sodomy. Offenders whose controlling (most serious) offense is a sex offense represent 9.3 percent of the inmate population. According to this definition, the state inmate sample contained 1,273 sex offenders or 10.5 percent. Virtually all sex offenders are male (99 percent).

We compared sex offenders to those offenders incarcerated for committed or attempted murder, homicide, manslaughter, kidnapping, robbery, assault, extortion, hit and run driving, child abuse and "other violent offenses."

Data Limitations

There are several limitations to these data that deserve mention. The data are cross-sectional and based on inmates' retrospective self-reports. Such data must be viewed critically because of the potential for inaccurate reporting due to memory failure, social desirability, incomplete information and issues of confidentiality. Additionally, within this sample, it is possible that not all incarcerated sex offenders are being captured. Some sex offenders may have been convicted of a lesser offense or have been charged with another violent offense (such as murder[*]) that superseded their sex crimes (although if the offender reported that he was convicted of both murder and rape, he would be categorized as a sex offender). These sex offenders may end up either excluded from the analysis or included as other violent offenders.

Finally, incarcerated sex offenders are likely to represent a specific sub-population of sex offenders due to such factors as differences in the processing of sex offenders, the reporting practices of different types of victims and the criminal histories of offenders. For example, only about half (48 percent) of those arrested for rape are convicted. Of those, just over two-thirds receive a prison sentence.[1] Thus, these findings are not generalizable to all sex offenders, only those who are arrested, convicted and incarcerated. Despite these limitations, the data available can provide rich insights into the substance-involvement and other characteristics of incarcerated sex offenders.

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[*] It is estimated that 0.7 percent of murders in 1994 involved sexual assault (Greenfeld, L.A. (1997). *Sex offenses and offenders: An analysis of data on rape and sexual assault.* Washington, D.C.: Bureau of Justice Statistics, U.S. Department of Justice).

APPENDIX G

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Appendix H
Descriptions of Program Interventions and Contacts

Sex Education, STD and Substance Abuse Prevention Programs

F.L.A.S.H.

The *Family Life and Sexual Health* curriculum was created by the Seattle-King County (WA) Department of Public Health in the late 1980s and early 1990s. *F.L.A.S.H.* offers a relatively detailed and comprehensive discussion of the connection between drugs and sex of the curriculum-based programs. It is geared carefully to specific age groups. In grades K-6, there is no discussion of the sex/drugs connection. Children in grades seven and eight receive information about the potential impact of alcohol and drugs in a section on AIDS. For ninth and 10th graders, the program attempts to counter rape myths around the culpability of men and women who are drinking, and explores the impact of substance use on decision making which may lead to unsafe sex. Eleventh and 12th graders receive a comprehensive discussion of how alcohol and drugs may affect sexual response, and sex under the influence is included in a discussion of the kind of sexual experiences that can lead to guilt and regret.

F.L.A.S.H. Grades 9/10
Lesson Plan 9: Sexual Exploitation[1]

Exploitation happens whenever people:
- try to guess what the other person feels, instead of asking,
- don't believe it when the other person **says** what he or she feels.

Exploitation also happens when people:
- let alcohol or another drug get in the way of an honest decision (a person can **never** truly consent while under the influence),
- know a pregnancy can happen but don't talk about it,
- think they might have an infection…and don't bother to tell the other person,
- get involved with someone a lot older (or younger) than they are…who has a lot (or a lot less) experience, confidence, and emotional power than they have.

F.L.A.S.H. includes a frank and complete discussion of all areas of sexuality, including contraception. In doing so, it does not neglect the possible role played by alcohol and drugs. However, it is not a drug education program and does not include a thorough discussion of the issues of substance use and abuse. Because it was developed a decade ago, its presentation is somewhat dated. This program has been used in most schools in Seattle as well as in other states and in Canada. There are no formal data available on the impact of the curriculum on substance use or sexual behavior.

SMART Moves

Designed by the Boys & Girls Club of America in 1988 as a "skills development program," *SMART Moves* is a drug, alcohol and teen pregnancy prevention program that focuses on abstinence to both drugs and sex. Information about contraception is not included. *SMART Moves* offers three different components crafted to be age specific for children six- to 15-years-old, as well as a program for parents.

For ages 6 – 9, *SMART Moves* begins discussion about substance abuse, self-awareness and healthy habits, but does not talk about sex. For ages 10 – 12, there is extensive information about puberty, reproduction, consequences of sexual activity and how/why to delay sex. For this age group, the curriculum does not specifically link substance use and sex. The program for ages 13 –15 fully introduces both drugs and sex and the connection between the two, including the impact of different drugs on sexual function, sexual decision making and resisting sexual pressure. *SMART Moves* also offers a parent program with information about drugs and alcohol, adolescent sexual development and other teen issues, and strategies for parent-child communication.

This program is not as thorough in its focus on sex as is *F.L.A.S.H.*, but it offers more complete drug information. The curriculum was updated in 1998. According to representatives of the Boys & Girls Clubs, it has been implemented by about half of the 2,000 Boys & Girls Clubs around the country and by several school systems. A three-year evaluation conducted in the early 1990s found that drug use and drug dealing activity was significantly lower in housing projects that had Boys & Girls Clubs with *SMART Moves* programs.[3]

The SMART Operators Guide
Why Use This Approach?
The Rationale for SMART Moves (excerpt)[2]

Many high-risk behaviors appear to have similar causes. Older approaches to prevention typically treated alcohol, tobacco and other drug involvement and teenage pregnancy as separate issues. Now we have substantial evidence that many of the same risk factors apply to these and other youthful problem behaviors. Also involvement in one risk behavior, such as alcohol use, may increase risk of involvement in another risky behavior, such as sexual activity.

Best Friends

Best Friends is an abstinence-based program for adolescent girls to teach "self-respect through self-restraint." The program, started in 1987, focuses on friendship, love and dating, self-respect, decision-making, alcohol abuse, drug abuse and AIDS and STDs. The program is run as part of the school day, targets girls in fifth through 12th grades and is designed for groups of 20 to 50 girls. Girls cannot join after the seventh grade as the program seeks to reach girls early and provide support as they mature. Girls who have already had sex are allowed to participate, but if a Best Friends girl becomes sexually active she is expected to drop out of the group. The program includes weekly physical fitness classes and meetings with mentors, occasional outside speakers, cultural events and an annual recognition ceremony.

Best Friends
Post Program Survey
(1997-98)
Participants: 1,655

Sexual attitudes and behavior:
A boy has asked her on a date: 49%
Has had sexual intercourse: 3%
Was sexually abused: 3%
Wants to wait until at least after high school to have sex: 81%
Wants to wait until marriage to have sex: 76%

Drugs and alcohol:
Has friends or family who are using illegal drugs: 19%
Has been offered illegal drugs: 13%
Used illegal drugs: 3%
Drank alcohol: 12%
Smoked cigarettes during the last year: 9%

In addition to sexual abstinence, the program incorporates a "no use" message for drugs. Substance use is also discussed in conjunction with issues of sexual violence. No information on contraception is given. Best Friends reinforces the importance of girls watching out for and protecting each other. A strong message of the program is that the girls are valuable and worthy--they can make choices to avoid risky behaviors of sex and substance use help ensure a positive future. At the same time, Best Friends takes a very strong approach to anti-sex and drug messages, emphasizing the negative consequences of sexual activity and of drug use.

Best Friends now runs several programs around Washington DC and operates in 25 other school districts across the country.[4] According to the Best Friends literature, a 1995 evaluation found that participants were much less likely to be sexually active or to have been pregnant than a 1993 sample of adolescents in DC public schools.[5] Eighty-six percent of Best Friends girls abstained from sex compared to 27 percent of the comparison sample. One percent of Best Friends girls compared to 26 percent of the comparison sample reported ever being pregnant. Twelve percent of Best Friends girls reported drinking alcohol and three percent ever using an illegal drug. These substance use rates are considerably lower than those of students in the Youth Risk Behavior Survey analyzed by CASA. Among these students, 79 percent report drinking alcohol and 52 percent report ever using drugs.[6]

SNEAKERS

Florence Crittenton Services of Greater Washington, DC operates a teen pregnancy prevention program for adolescent girls called SNEAKERS that emphasizes sexual abstinence, life skills development and goal setting. SNEAKERS targets girls between the ages of 10 and 18 and includes those at-risk for drug use and risky sexual activity. While program emphasis is placed on delaying sex as the best means of avoiding pregnancy and STDs, the program provides information about puberty, reproduction and pregnancy/STD prevention. Abstinence is encouraged as is the idea of a "second virginity" for girls who are already sexually experienced or who become sexually involved while a member of the group. SNEAKERS does not remove a girl from the program if she becomes pregnant, believing that she will need the support of the group more than ever. The groups are mostly school-based and meet weekly throughout the school year with a trained facilitator. The program is voluntary and girls are recruited through the school administrative staff as "those most in need."

Chances or Choices: A Curriculum for Teen Decision Making about Sexuality, Alcohol & Drugs

For young people, sexual activity and drug/alcohol use are two modes of experimenting with adult behavior that can have tragic consequences. These two kinds of experimentation often occur together. Teens frequently say they use alcohol to reduce the anxiety of peer pressure in general, and sexual pressure specifically. This practice casts sexual decision-making and sexual experience into a mode where:

A. Sex is allied to an illegal, unhealthy behavior.

B. Sex is experienced as part of aggression, violence, illness and interruption of the body's ability to respond, which often accompany use of drugs/alcohol.

C. Social skills, sexual feelings, and experiences are learned in an altered state of awareness and control, thus encouraging dependence on alcohol/drugs for social/sexual functioning.

D. Impairment of sexual decision-making can undermine an adolescent's self-esteem and the building of a trusting communication between friends and dates.

Including problem-solving about drugs/alcohol together with sexuality in a curriculum acknowledges hard decisions teens face, positive and negative ways of experiencing and expressing sexuality. It helps young people understand what it means to ***own*** *their behavior and feelings, to* ***own*** *the consequence.*[7]

While substance use prevention is not one of the articulated goals of the SNEAKERS program, their comprehensive approach to health includes avoiding substance use. Girls are given literature about substance use and alcohol and drugs are discussed in the curriculum as factors in decision making about sexual activity. If a particular girl has substance abuse problems, they will make referrals to other programs, agencies or professionals.

Over 3,000 girls have been involved in SNEAKERS since 1983. In 1998, there were programs running in 34 schools with 10 to 14 girls per group. There are long waiting lists of schools and communities who want a SNEAKERS program. No data are available on program effectiveness, but half of the girls who had been sexually active prior to the program reported that they had abstained from sex during their involvement in SNEAKERS.

Chances or Choices

Planned Parenthood of Seattle, Washington developed Chances or Choices: A Curriculum for Teen Decision Making about Sexuality, Alcohol & Drugs in 1988. This is a considerably less comprehensive or intensive program than either

F.L.A.S.H. or SMART Moves. It does address both issues of substance use and sex together, but the curriculum does not differentiate by age. Chances or Choices offers exercises in identifying values and learning how to communicate about issues of sex and drugs. It is not designed to build knowledge and skills as a child ages. There are no outcome data available and the utilization of the program has not been tracked.

Girls Inc. of Memphis (TN)

Girls, Inc. is a national organization started in 1946 to improve the lives and opportunities of girls. Girl's Inc. operates an Adolescent Counseling Center for girls age 12 to 18 to learn about human sexuality, delaying sexual activity, and family planning. They also offer individual and group counseling, a substance education program for girls and boys age 11 to 14 called "Friendly PEERsuasion" and a health and sexuality program for girls aged 12 to 14 called Will Power/Won't Power. Their programs focus primarily on pregnancy prevention and sexuality, stressing confidence building and self-sufficiency, and education and support to make informed decisions. For older girls, Girls, Inc. gives contraceptive information; for younger children, the programs are abstinence-based. Most of Girls, Inc.'s programs are community-based, offered upon the request of the school/organization and are presentation/workshop type programs.

Girls, Inc. of Memphis has not emphasized the connection between sex and substance use in their programs; however, risky situations are discussed and substance use is considered a factor in such situations. Staff also make referrals and use their strong links with community resources to get help for these young people. The majority of the girls served by Memphis Girls, Inc. (some 3,000 girls a year) are African-American, from families earning less than $15,000 a year and headed by a female parent. No local outcome data are available, but evaluations from the Girl's Inc. national office find that girls who participate in Girl's Inc. pregnancy prevention programs are less likely to initiate sex and that those involved in Friendly PEERsuasion were slightly more likely to delay use of drugs.[8]

Teen Choice

Inwood House, a New York City pregnancy prevention and teen parenting education and support organization, runs a school-based pregnancy and AIDS prevention program called Teen Choice. In operation since the late 1970s, Teen Choice is a voluntary program run by social workers who lead weekly groups with eight to ten students and provide individual counseling. The program runs during the school day, and participants chose to attend the program in lieu of a gym class or other elective. Most of the junior high programs have an abstinence-based message, while contraceptive information is available for high school students.[9] The director of Teen Choice reports some difficulties working with an abstinence message--if abstinence is overly stressed they lose some kids immediately, especially those students who are already sexually active.

Substance use and abuse are not key components in the Teen Choice programs, but issues of substance use among the family members of participants and the impact of drug dealing are important topics.[10] In 1998, Teen Choice reached over 7,000 at-risk junior and senior high school students (mostly African-American and Hispanic) in 13 public schools.[11] An evaluation of the program found that the program affects positive attitudinal and behavioral changes among participants.[12]

Male Responsibility Project

Created in 1993 and operated by the Memphis Planned Parenthood, the Male Responsibility Project is an HIV/AIDS prevention program targeted towards high risk incarcerated juvenile males, attempting to teach sexual responsibility and skill building. It is a four session program (1.5 hours a session) that includes factual information on AIDS, information and strategies for risk and prevention, problem-solving and communication, and discussion of other STDs, identifying support systems, and date rape. The majority of these young men are in detention for drug crimes or drug involvement and they are typically serving a sentence of six to eight months.

This program is currently only operating in one juvenile detention facility in Memphis. However, it was designed to be used in other settings as well. Planned Parenthood's preliminary analysis of the data from pre- and post-tests finds that participants improved their understanding of key concepts related to HIV and STD infection, risky behaviors, and prevention strategies by at least 25 percent.

Gay Men's Health Crisis (GMHC)

Programs serving the gay community appear to be more focused on the conjunction of substance use and sexual activity than do sex education programs aimed at teens or the general public. Located in New York City, GMHC is the largest nonprofit AIDS organization in the United States. Founded in 1981, GMHC provides services to over 9,500 people with HIV or AIDS and their families. In addition to hands-on care and services, GMHC offers educational programming. They distribute a million education publications and brochures every year that teach about HIV/AIDS and safer sex, as well as more than a half a million condoms at community events, gyms, bars and clubs. A national hotline offers free individual counseling and receives about 41,000 calls a year. GMHC runs safer sex seminars and workshops for gay and bisexual men and women, conducts neighborhood interventions in bars and clubs, and runs poster campaigns to prevent AIDS.[14]

GMHC created and distributes a booklet called "Drugs in Party-Land: Think Thru the Buzz" to educate people about the impact of substance use on sexual activity and to provide strategies for realistically managing the connections. The booklet discusses the impact of ecstasy, "K," GHB, poppers, cocaine, and crystal meth. It tells people what drugs are and what they do. It admits that drugs are pleasurable and that people may want to use them, but it discusses the risks and contraindications. For each drug, a brief discussion of how it may impact sex and the transmission of HIV is included. Planning ahead and having condoms available are emphasized.

HIV/AIDS Education: The Male Responsibility Project (Planned Parenthood) Statistics[13]

Participants: 356

Mean age: 16.5
African-American: 98%

Sexual Activity and Condom Use
Ever had sex: 77%
Have children: 20%
10 +lifetime partners: 38%
4 – 6 partners: 22%
1 – 3 partners: 19%
Never uses a condom:
  With main partner: 33%
  With other partners: 42%

Alcohol/Drug Use
Ever drank beer/wine: 70%
Ever used marijuana: 66%

Substance Use and Sex:
Sometimes or always drink or use drugs prior to sex (self or partner): 53%

Substance Abuse and Sexual Violence Prevention Programs

Sexual Violence in Teenage Lives: A Prevention Curriculum

This program was created by Planned Parenthood of Northern New England for teens. Used in high schools and in some middle schools, this curriculum seeks to teach students how to recognize sexual violence, understand the impact of sex role stereotypes and the media, reduce risks of becoming involved in a violent relationship, find help for victimization, learn to communicate effectively, and establish and maintain relationships that are healthy and pleasurable.[16] Students are challenged to think about realistic solutions to the intersection between alcohol and violence.

The potential role of alcohol or drugs in sexual violence is considered throughout the curriculum, looking at both the use of alcohol or drugs by the victim and by the perpetrator. The effects of substances on communication, reasoning skills, and self control and the prevalence of substance-related rape myths (i.e., "it is not rape if she was drunk") are discussed. The program also recognizes that substance use can be a way to deal with pain and anger and might be a signal that sexual violence has occurred. Approximately 500 copies of the curriculum have been purchased by organizations across the country, particularly for use in school settings.[17] One pre- and post-test examination found that students who participated in a program using this curriculum demonstrated improved ability to recognize conditions related to sexual violence and that the program worked best with older students.[18]

Sexual Violence in Teenage Lives: A Prevention Curriculum[15]

Reducing Your Risk of Sexually Violating Someone at a Party

1. *Understand and respect that people have their own boundaries.*
2. *Understand the role and alcohol and other drugs play in consent.*
3. *Be aware that alcohol and other drugs affect your ability to make clear decisions and may contribute to a change in behavior.*
4. *Don't assume just because someone is acting a certain way or wearing certain clothing that they want to have sex. Ask the person!*
5. *Realize that it's okay to want to have sex, but it's not okay to expect it. Your partner may not want exactly what you want; find out.*
6. *Always provide an opportunity for your partner to say "no" and respect their answer.*
7. *If you feel like someone's giving you mixed messages, maybe that person isn't for you.*

Sexual Assault Support Service Workshops

Sexual Assault Support Services (SASS) of New Hampshire provides educational programming on date rape, sexual harassment, child sexual abuse and other sexual assault issues in schools and throughout their communities.[19]

SASS tailors the workshops (usually one-hour sessions) to the requests of the teachers and administrators. One workshop on sexual violence in the media challenges students to analyze images of women, violence, and sex in magazine and newspaper ads and music videos. Discussion of the pervasiveness of these images leads to discussion about how issues of sexual violence are an everyday part of the lives of women. Drinking situations are recognized as potentially risky environments and addiction as a coping mechanism for dealing with the consequences of sexual assault.

Another workshop on "sexual assault and the law" focuses on understanding consent and the role that substance use may play. The educator discusses definitions of rape and statutory rape and presents examples of cases in which alcohol is involved. The program attempts to get students thinking about the meaning of consent, how alcohol complicates consent and expectations about the actions of people who are drinking.

Columbia/Barnard Committee to Prevent Alcohol and Other Drug-related Sexual Assault

The offices of health services, substance abuse programs, women's health, rape crisis center, and academic programs of Columbia University and Barnard College in New York came together to form the Committee to Prevent Alcohol and Other Drug-Related Sexual Assault. They sponsored several lectures which dealt with issues such as alcohol and rape, the legal system, and date rape prevention. There are no outcome data on these efforts.

Sex Under Pressure

Members of the Scream Theater at Rutgers University (NJ) perform during orientation for incoming students a program called *"Sex Under Pressure."* The performance begins with a brief introduction by the facilitator who defines sexual violence and discuses why this issue is important. Then six peer educators perform a 20-minute skit that demonstrates different scenarios of dating pressure, one of which ends in a rape. Alcohol is usually presented in the scenes both as a normal part of socializing among college students and as a possible factor in sexual violence. The level of which alcohol is presented as a factor in the skits depends upon the student actors, and is most often used as part of the context of sexual violence, not as a motivator. The student actors feel that it is important to address the reality of alcohol in their lives and to learn how to draw the line between consent and nonconsent when alcohol is involved.[21] Students are challenged to consider their beliefs about rape, how alcohol impacts those beliefs and how the characters might have changed their behavior to alter the situation.

Alcohol, Sex and Rape

We hear a lot of things about alcohol, like...
- Alcohol inhibits clear thinking.
- Alcohol makes talking and listening more difficult
- Alcohol makes it harder to assess risk.
- Alcohol can cause aggression.

For some people these effects sound pretty good. By drinking or using drugs they can avoid thinking or talking about rejection, guilt, or reputation and just do it...get themselves and/or the other person drunk enough to let sex "just happen."

But consenting sex doesn't "just happen." Consenting sex requires sober, verbal communication without intimidation or threats. Many states' laws recognize that when someone is drunk they are unable to give consent. Additionally, being drunk is never an excuse for raping someone.

Excerpt from *Acquaintance Rape: What Everyone Should Know*, a pamphlet by the American College Health Association.[20]

Scream Theatre is funded by a state grant and performs both on the Rutgers campus, and for other colleges and high schools throughout their area. The program has received very positive attention and have been struggling to keep up with the demand made by local high schools. The large demand for programs like Scream Theatre in high schools is promising, as one program director believes that alcohol education must happen before students get to college.[22] No outcome data are available.

Substance Abuse Treatment Programs

New Directions

New Directions is an adult residential substance abuse treatment facility in Memphis that houses 30 men and 10 women for up to 30 days and provides a year of aftercare. Operating since 1991, New Directions the only treatment program in Memphis that has an HIV/AIDS prevention education component (this component is fully state funded).

Residential clients are assessed for a variety of needs including HIV/AIDS, prior victimization and current sexual behavior problems. The clients are given HIV/AIDS education and are encouraged to be tested for the virus, for which the program provides counseling and transportation to the test site. The AIDS coordinator estimates that 30 percent to 40 percent of their residential treatment clients are HIV-positive or have AIDS.[23] The majority of these obtained the virus through sexual activity, rather than injection drug use. The large majority of their clients also have some sexually transmitted disease and the AIDS coordinator finds that among these clients, there are often many other problems relating to addiction, health, family, and poverty (a full-time nurse and part-time doctor are available to address these other health needs of clients).

New Directions also conducts outreach AIDS education, targeting African-American injection drug users and their partners. They provide HIV education for other alcohol and drug facilities and community events and organizations. An assessment of the impact of the program is being developed.

The Substance Use Counseling and Education (SUCE) Program at GMHC

This program was developed in 1993-1994 to educate gay men about the relationship between substance use and safer sex. The program directors found that substance abuse and HIV prevention interventions that gave messages such as "just say no" or "just use a condom every time" may do harm by creating a community norm that promotes silence, isolation and alienation among men who feel that they are unable to conform to this standard. SUCE runs as a three-session workshop prior to more intensive interventions and attempts to match the appropriate level and character of the intervention with the client's readiness to change both their substance use and their sexual behavior.

The SUCE program encourages sexually active gay men who use alcohol and/or drugs to think about the role that substance use plays in their lives, assess the impact of their use on their sexual behavior, participate in a process of behavior change and develop a support network.[24] The program emphasizes understanding the environment where the substance is being used and how this environment shapes drug use and sex. The SUCE program also attempts to respond to the racial and cultural needs of their clients. No formal outcome data are available.

Programs for the Victims of Violence

Milwaukee (WI) Women's Center (MWC)

MWC began in 1980 as a shelter for battered women. The program administrators found that 80 percent of victims report that their partners were using substances during incidents of domestic violence and changed their focus to deal with both issues. In 1998, MWC answered over 11,000 calls to their crisis line and served almost 1,900 clients. In addition, they conducted 211 community education/prevention presentations.[25]

MWC has attempted to create a space where women can talk about their issues of sexual violence, sexual activity and identity, and substance use without fearing loss of services or stigmatization. Clients in the clinic and the domestic violence shelter receive extensive screening that covers issues of domestic violence, sexual violence, substance abuse, mental health and family needs. This screening is then used to create a comprehensive treatment plan specifically tailored to the needs of each client. When residential substance abuse treatment is needed, MWC refers to collaborating providers.

MWC also works with men who are violent, which as atypical for a women-centered violence program. They run a 16-week education and therapy program for batterers, that attempts to also address substance abuse and mental health issues. Many of the men in this program are referrals from probation and parole programs. Currently they have no outcome data for their women's program, but have four years of profile data and self-reports of program effectiveness on men who came to the batterers treatment program. These results are unpublished but early analysis suggests that the program helps men to begin a process of attitude and behavior change around issues of violence.[26]

Programs for Incarcerated Offenders

New York State Chemical Dependency Abuse/Domestic Violence Program

Chemical Dependency/Domestic Violence Program, 1996[27]
Participants: 515

Under the influence during the offense for which offender is serving time:
- Alcohol only: 12%
- Drugs Only: 40%
- Both Alcohol and Drugs: 16%
- Neither: 32%

Under the influence at least once while committing an act of domestic violence: 84%

Located at the Eastern Correctional facility Annex in Ulster County, New York, is the first prison-based program that addresses both substance abuse and domestic violence.[28] [29] [30] It is a six-month therapeutic community program for up to 180 male offenders within a year of parole who have histories of domestic violence and substance abuse. The Center for Substance Abuse Treatment has identified this program as a national model of a domestic violence and chemical dependency treatment. The program has a spiritual base and attempts to address other educational, vocational, and health issues of participants.

Offenders who are serving time specifically for a sex offense are not in the program (most participants committed a drug offense, a robbery, or a burglary[31]) but at intake about a quarter of men in the program admit that their violent behavior included sexual violence, which the director believes to be a very low estimate of the actual prevalence of sexual violence among these men.[32] During sessions, the program does not differentiate between sexual violence and other forms of domestic violence but they do discuss sexual violence in their groups.

Staff training has become an important part of the program, as finding qualified staff who had the dual focus on substance use and domestic violence has been difficult. Cross-training and team-building among clinical and correctional staff has also been found to be essential to the functioning of the program as the corrections culture and resistance from correctional personnel can be a barrier to this type of program.

The Minnesota Department of Corrections

The Minnesota Department of Corrections (DOC) since 1983 has been operating one of the few sex offender programs that includes an intensive and comprehensive substance abuse component. The original decision to treat substance abuse and sexual offending within one program was not clinically-based, but rather was due to correctional needs and issues of inmate safety. Begun as a 52-bed program in a maximum security prison, the program was transferred in 1994 to the Lino Lakes Minimum Security Correctional Facility and grew to 150 beds by 1997. It now has about 275 annual participants.

The Minnesota DOC estimates that 22 percent of their inmates are sex offenders and that 70 percent of these sex offenders have substance dependence problems.[33] Approximately 45 percent of the 1,110 sex offender incarcerated in Minnesota participate in sex offender treatment while in prison.[*]

Upon admission to the Lino Lakes program, participants complete a 30-day assessment phase, during which substance abuse and addiction treatment needs are evaluated and an individual treatment plan is developed. Substance treatment typically precedes sex offender specific treatment for those offenders with dual diagnoses. The program provides both short-term (three to six months) and long-term (nine to 12 months) of substance abuse treatment, as needed. The program is run as a therapeutic community, incorporating a traditional 12-Step model with a cognitive behavioral approach. Individual and group therapy, self-help groups, and psychoeducational classes designed to provide information and build interpersonal and intrapersonal skills are included. Programming addresses dysfunctional attitudes, thoughts, and behaviors associated with substance abuse in order to reduce the participant's potential for recidivism and enhance the development of a responsible, alcohol- and drug-free lifestyle.

Upon completion of the substance abuse treatment phase, participants are placed in primary sex offender treatment. This phase of programming typically requires an additional nine- to 12-months and includes a focus on sexual assault dynamics and the development of healthy sexual attitudes and behaviors. The information and skills obtained in the substance abuse treatment phase are enhanced and integrated in this phase of programming. Psychoeducational programming is provided according to specific treatment plans. Program components include sexual assault dynamics, victim empathy, anger management, criminal thinking, cognitive restructuring, grief and loss, personal victimization, parenting, sexuality education (including HIV prevention) and relapse prevention.

Following primary sex offender treatment, participants enter the transitional phase of programming, where the focus is on further developing and applying relapse prevention strategies and planning for their return to the community.

Minnesota program directors have identified several obstacles to the development of an integrated program.[34] These include: limited funding sources for treating the dual needs of this population; lack of experienced professionals who are sufficiently trained to assess and treat this population and willing to work in a prison setting; growing number of offenders with mental illness diagnoses; growing number of gang-related offenders; integration of aftercare into the program; and lack of funding for research on program effectiveness.

The Minnesota DOC has found that an integrated approach to treatment of sexual violence and substance abuse requires: availability of a supportive administration; an educated staff; a physical environment that safeguards the offender against reprisal; the involvement and support of all staff, including correctional officers and other nonclinical staff; and maintaining solid communication and collaboration among members of the clinical and correctional team. Therapists working with men in the substance treatment phase must understand and address issues of sexual violence and criminal behavior and those working with men in the later stages of therapy must continue to address the risk factors and impact of substance abuse.

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[*] Treatment participation is not mandatory, but offenders who refuse to follow treatment directives are subject to additional prison time. Some offenders refuse to participate and others are excluded from the program because they do not meet criteria for admission. Criteria include having a minimum of nine months and a maximum of 48 months to serve upon admission to the program, no formal disciplinary infractions resulting in a segregation sentence for 60 days prior to admission to the program, no evidence of active psychosis, acute suicidal ideation or other mental health concerns that would interfere with an offender's ability to participate effectively in programming, and no evidence of developmental disabilities that would preclude an offender from achieving program goals. In addition, the program limits then number of sex offenders who are in severe denial of their offenses. Some medical conditions may preclude an offender's participation in the program.

Providing substance treatment within the sex offender program to those with dual problems has been found to increase the offender's openness and receptivity to treatment, provide opportunity for increased accountability for all areas of the offender's life, and allow for a coordinated and comprehensive continuum of care. The development of more programs like this one may improve treatment for sex offenders and, by doing so, prevent future crimes among these men and loosen the ties between substance use and sexual violence.

Contacts

Best Friends (Abstinence-Only Program)
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Chances or Choices: A Curriculum for Teen
Decision Making About Sexuality,
Alcohol & Drugs
Planned Parenthood of Western Washington
2211 East Madison Street
Seattle, WA 98112-5397
(206) 328-7715

Chemical Dependency/Domestic Violence
Program -- Eastern Correctional Facility Annex
New York State Department of
Correctional Services
Public Relations Department
Albany, New York 12226-2050
(518) 457-8182

Family Life and Sexual Health Curricula
(F.L.A.S.H.)
Seattle-King County Department of
Public Health
1st Interstate Center
999 3rd Avenue, 9th Floor
Seattle, WA 98104
(206) 296-4672

Girls Incorporated
National Headquarters
(212) 509-2000
National Resource Center
(317) 634-7546
Girls Inc. of Memphis Tennessee
(901) 523-0217
www.girlsinc.org

The HIV/AIDS Education Male
Responsibility Project
Planned Parenthood of Memphis, Tennessee
1407 Union Avenue, 3rd Floor
Memphis, TN 38104
(901) 725-3017

The Milwaukee Women's Center, Inc.
611 N. Broadway, Suite 230
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APPENDIX H

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Appendix I
Resources*

Following is a list of national resources that can provide information or assistance on issues related to substance abuse, sexual violence and sexual health. It includes a sampling of organizations that CASA identified during the course of preparing this report and is not meant to be an exhaustive list. Many other organizations and resources provide information and assistance at the state, regional and local level; these can be found through local telephone directories, government health departments or the Internet.

Substance Abuse Assistance and Information

National Drug Helpline
(800) DRUG HELP

Youth Crisis Hotline
(800) HIT-HOME

National Clearinghouse for Alcohol and Drug Information (NCADI)
Substance Abuse and Mental Health Services Administration (SAMHSA)
P.O. Box 2345
Rockville, MD 20852
(800) SAY-NOTO (729-6686)
www.health.org or www.samhsa.gov

National Institute on Alcohol Abuse and Alcoholism (NIAAA)
National Institutes of Health
6000 Executive Boulevard
Bethesda, MD 20892
(301) 443-3860
www.niaaa.nih.gov

National Institute of Drug Abuse (NIDA)
National Institutes of Health
6000 Executive Boulevard
Bethesda, MD 20892
(888) NIH-NIDA
www.nida.nih.gov

National Council on Alcoholism and Drug Dependence Hopeline
12 West 21st Street, Suite 700
New York, NY 10010
(800) NCA-CALL (622-2255)

Alcoholics Anonymous
Box 459, Grand Central Station
New York, NY 10163
(212) 870-3400
www.alcoholics-anonymous.org

Al-Anon, Alateen Hotline
1600 Corporate Landing Parkway
Virginia Beach, VA 23454
(800) 344-2666
www.al-anon-alateen.org

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* The National Center on Addiction and Substance Abuse at Columbia University (CASA) is not related to nor affiliated with any of the organizations listed. Further, CASA does not necessarily endorse the ideas promulgated by these organizations or certify the accuracy of information available through these organizations.

Narcotics Anonymous
PO Box 9999
Van Nuys, CA 91409
(818)773-9999
www.na.org

Violence Crisis and Information

National Child Abuse Hotline
Child Help USA
15757 North 78th Street
Scottsdale, AZ 85260
(800) 422-4453

National Domestic Violence Hotline
(800) 799-SAFE

Rape, Abuse and Incest National Network
Hotline (RAINN)
(800) 656-HOPE

National Clearinghouse on Marital and Date
Rape
2325 Oak Street
Berkeley, CA 94708
(510) 524-1582
www.members.aol.com/ncmdr

Center for Sex Offender Management (CSOM)
Center for Effective Public Policy
8403 Colesville Road, Suite 720
Silver Spring, MD 20910
(301) 589-9383
www.csom.org

Teen Pregnancy Information and Programs

The National Campaign to Prevent Teen
Pregnancy
2100 M Street NW, Suite 300
Washington, DC 20037
202-261-5655
www.teenpregnancy.org

National Fatherhood Initiative
One Bank Street; Suite 160
Gaithersburg, MD 20878
(301) 948-0599
www.fatherhood.org

National Organization on Adolescent Pregnancy,
Parenting and Prevention (NOAPPP)
2401 Pennsylvania Avenue, Suite 350
Washington, DC 20037
(202) 293-8370
www.noappp.org

STD/HIV/AIDS Information

Centers for Disease Control and Prevention
(CDC) (800) 311-3435
CDC National STD Hotline (800) 227-8922
CDC National HIV/AIDS Hotline
(800) 342-AIDS
www.cdc.gov/

General Reference

Sexuality Information and Education Council of
the United States (SIECUS)
130 West 42nd Street, Suite 350
New York, NY 10036-7802
(212) 819-9770
www.siecus.org/

National Women's Health Information Center
Office of Women's Health
1-800-994-WOMAN (9662)
www.4woman.gov

Planned Parenthood Federation of America
810 Seventh Avenue
New York, NY 10019
(800) 230 PLAN
www.plannedparenthood.org